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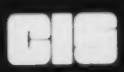

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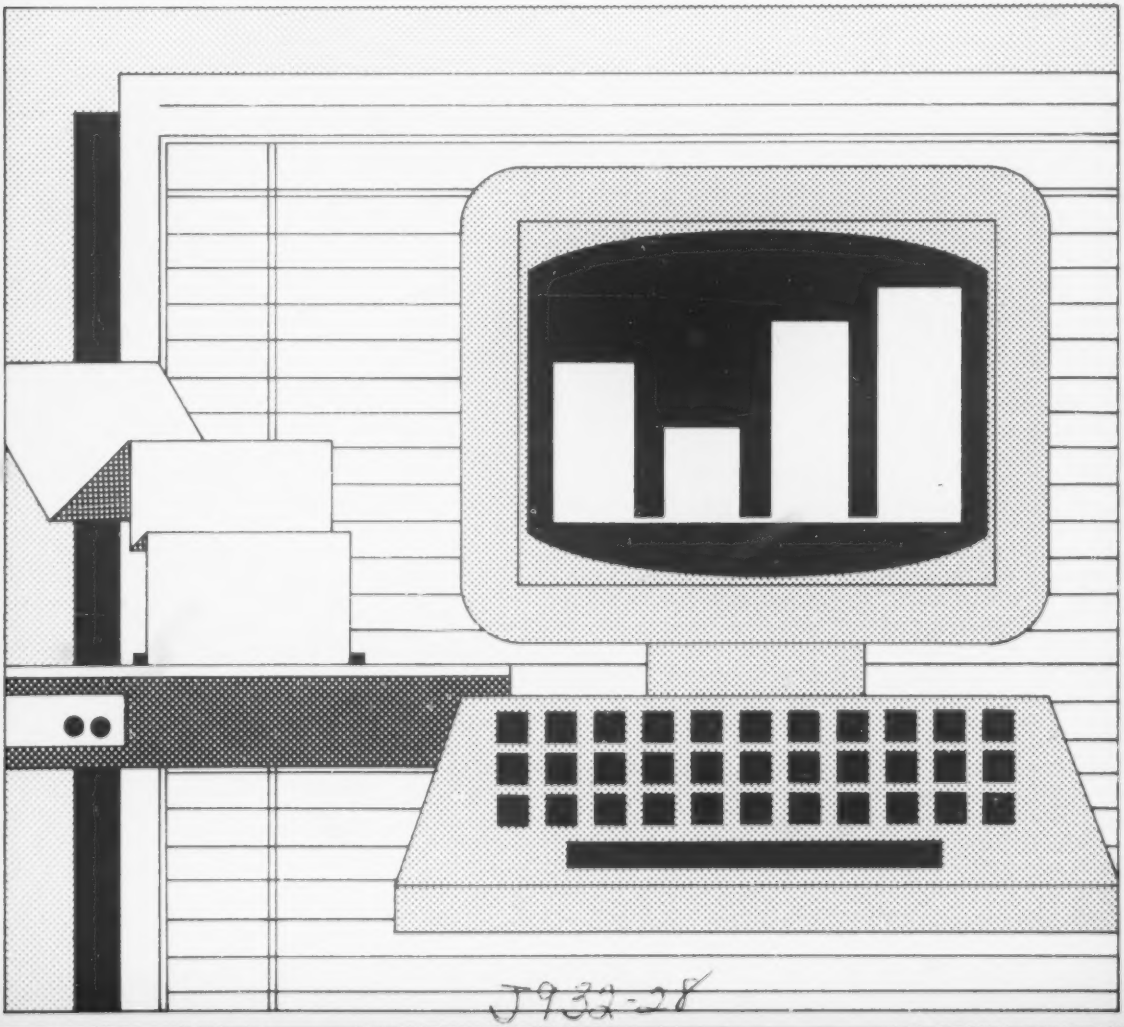
August 1988

The Economic and Budget Outlook: An Update



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THE ECONOMIC AND BUDGET OUTLOOK: AN UPDATE

A Report to the
Senate and House
Committees on the Budget

As Required by Public Law 93-344

The Congress of the United States
Congressional Budget Office

87-885 - 88 - 1

NOTES

Unless otherwise indicated, all years referred to in Chapter I are calendar years and all years in Chapter II are fiscal years.

"Growth during 1988" or "growth in 1988" means growth from the end of 1987 to the end of 1988 except where otherwise specified. "Growth between 1987 and 1988" means the percentage difference between the annual average levels in 1987 and 1988.

Unemployment rates throughout the report are calculated on the basis of the civilian labor force.

Details in the text and tables of this report may not add to totals because of rounding.

In figures showing periods of recession, shaded areas indicate the months between cyclical peaks (P) and recession troughs (T).

The Balanced Budget and Emergency Deficit Control Act of 1985 (popularly known as Gramm-Rudman-Hollings) is also referred to in this volume more briefly as the Balanced Budget Act. The Balanced Budget and Emergency Deficit Control Reaffirmation Act of 1987 refers to amendments passed in late 1987 and is referred to in this volume more briefly as the Balanced Budget Reaffirmation Act.

In Chapter I of this report, the 10-year constant-maturity bond rate is referred to briefly as the 10-year bond rate.

PREFACE

This volume is one of a series of reports on the state of the economy and the budget issued periodically by the Congressional Budget Office (CBO). In accordance with CBO's mandate to provide objective and impartial analysis, the report contains no recommendations.

The analysis of the economic outlook presented in Chapter I was prepared by CBO's Fiscal Analysis Division under the direction of Frederick C. Ribe and Robert A. Dennis, with the assistance of Victoria S. Farrell, and George R. Iden. The analysis was carried out by Trevor Alleyne, Douglas R. Hamilton, James Kiefer, Angelo Mascaro, Stephen Miller, John F. Peterson, Frank S. Russek, Jr., John Sabelhaus, Matthew A. Salomon, John R. Sturrock, and Stephan S. Thurman. Research assistance was provided by Jeanne Dennis, Nicholas Dugan, Patricia Phill, and Bragi Valgeirsson.

The baseline outlay projections were prepared by the staff of the Budget Analysis Division under the supervision of James L. Blum, C.G. Nuckols, Michael Miller, Charles Seagrave, Robert Sunshine, and Paul N. Van de Water. The revenue estimates were prepared by the staff of the Tax Analysis Division under the direction of Rosemary D. Marcuss and Kathleen M. O'Connell. Principal staff contributors are listed in Appendix C.

Chapter II was written by Kathy A. Ruffing with contributions by David Elkes, Rosemary D. Marcuss, and Rodney Rasmussen. Appendix A was written by John F. Peterson, and Appendix B was written by Roger E. Hitchner. Paul N. Van de Water wrote the summary of the report.

Paul L. Houts supervised the editing and production of the report, assisted by Nancy H. Brooks. Major portions were edited by Amanda Balestrieri, Francis S. Pierce, and Sherry Snyder. The authors owe special thanks to Debra Blagburn, Linda Brockman, Marion Curry, Janice Johnson, Dorothy J. Kornegay, and L. Rae Roy, who produced the preliminary drafts. Kathryn Quattrone prepared the report for publication.

James L. Blum
Acting Director

August 1988

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SUMMARY

The American economy, now in its sixth year of expansion, grew at a 3.3 percent clip during the first half of 1988. The continued strength of the expansion has improved the budget outlook. The Congressional Budget Office (CBO) projects that the federal deficit under current budgetary policies will fall from $155 billion in 1988 to $148 billion in 1989, $136 billion in 1990, and $121 billion in 1993 and 1994.

THE BUDGET OUTLOOK

In CBO's winter report, the federal deficit was projected to rise in 1988 and 1989. But because of unexpectedly strong economic growth in the past six months, the deficit is now projected to remain relatively flat in 1988 and 1989 and to fall slowly thereafter. In relation to the size of the economy, the deficit declines from 3.4 percent of gross national product (GNP) in 1987 to 1.7 percent of GNP in 1994, as shown in the Summary Figure.

Deficit Projections and Targets

The Balanced Budget and Emergency Deficit Control Reaffirmation Act of 1987 (Public Law 100-119) set new deficit targets and modified the automatic spending reduction, or sequestration, procedures of the Balanced Budget Act of 1985 (Public Law 99-177). For 1989, the deficit target is $136 billion. If the estimated deficit exceeds $146 billion ($136 billion plus a $10 billion margin of error), it will trigger across-the-board cancellation of budgetary resources.

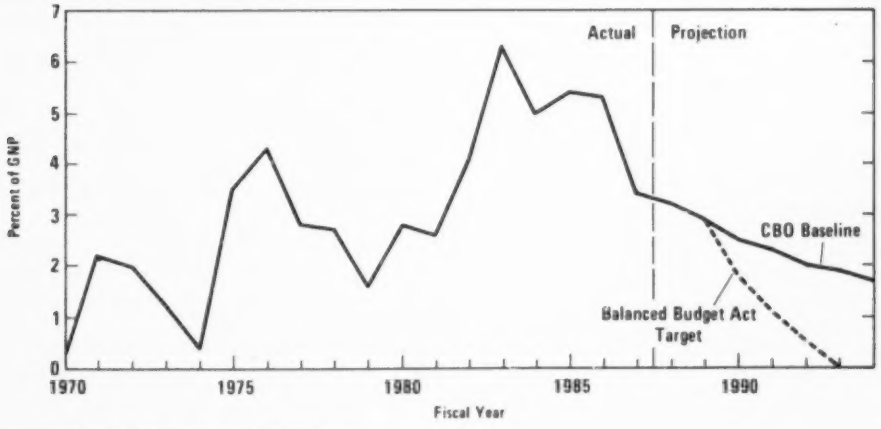
CBO's 1989 baseline deficit projection includes $5 billion in receipts from loan prepayments, which may not be counted toward meeting the Balanced Budget Act target. Excluding these receipts, the projected deficit is $153 billion, which exceeds the sequestration threshold by $7 billion and the deficit target by $17 billion. But CBO's deficit estimate plays no part in triggering automatic spending cuts.

The Balanced Budget Reaffirmation Act gives CBO only an advisory role in the sequestration process. Under the terms of the act, the Director of the Office of Management and Budget (OMB) alone determines whether or not automatic spending cuts are necessary and how large the cuts must be. In its July 28 *Mid-Session Review of the 1989 Budget*, OMB estimated that the 1989 base deficit for purposes of the Balanced Budget Act is $140.1 billion. According to OMB, the Disaster Assistance Act (Public Law 100-387), signed by the President on August 11, has added $3.9 billion to that amount. As a result, OMB's deficit estimate is expected to remain below the $146 billion threshold for its initial sequestration report. The differences between the CBO and OMB deficit estimates stem from different expectations about the economy and from various technical estimating differences.

For 1990, the Balanced Budget Act deficit target is $100 billion, and the deficit must be held below $110 billion to avoid sequestration. Last winter, when CBO's 1990 baseline deficit projection was $170 billion, this goal seemed very difficult to reach. Today, with CBO's baseline deficit at $136 billion, the 1990 target appears more attainable.

Summary Figure.

Budget Deficits and Targets



SOURCE: Congressional Budget Office.

Social Security and the Budget

The slow decline in the total deficit comprises very different trends in its on- and off-budget components, as shown in Summary Table 1. Between 1988 and 1994, the on-budget deficit grows from $194 billion to $234 billion, while the off-budget Social Security surplus increases from $39 billion to $113 billion. Economists and financial market participants generally focus on the total deficit, because it both determines federal borrowing needs and affects economic activity. The targets contained in the Balanced Budget Reaffirmation Act are also expressed in terms of the total deficit. Nevertheless, the Balanced Budget Act of 1985 took off-budget the two Social Security cash benefit trust funds, Old-Age and Survivors Insurance and Disability Insurance (OASDI).

SUMMARY TABLE 1. BASELINE DEFICIT PROJECTIONS AND TARGETS (By fiscal year)

	Actual	Estimate	Projections					
	1987	1988	1989	1990	1991	1992	1993	1994
In Billions of Dollars								
Baseline Projections								
On-budget deficit	170	194	199	199	206	212	220	234
Off-budget surplus[a]	20	39	52	63	74	86	99	113
Total deficit	150	155	148	136	131	126	121	121
Deficit Targets	b	144	136	100	64	28	0	b
As a Percentage of GNP								
Baseline Projections								
On-budget deficit	3.8	4.1	3.9	3.7	3.6	3.4	3.3	3.3
Off-budget surplus[a]	0.4	0.8	1.0	1.2	1.3	1.4	1.5	1.6
Total deficit	3.4	3.2	2.9	2.5	2.3	2.0	1.8	1.7
Deficit Targets	b	3.0	2.7	1.8	1.1	0.5	0	b

SOURCE: Congressional Budget Office.

a. Social Security (Old-Age and Survivors Insurance and Disability Insurance Trust Funds).

b. The Balanced Budget and Emergency Deficit Control Reaffirmation Act of 1987 established targets for 1988 through 1993.

Because payroll and other earmarked taxes now exceed outlays for Social Security benefits and administrative costs, Social Security is contributing to reducing the total federal deficit. An increasing portion of the Social Security surplus, however, results from interest income earned on the growing trust fund balances, which are invested in government securities. The interest income of the Social Security trust funds does not reduce the total deficit, because the interest earnings of the trust funds are also on-budget interest outlays of the U.S. Treasury.

Changes in Projections

Summary Table 2 categorizes the changes in CBO's deficit projections since last winter. The improvement stems entirely from stronger-than-expected economic growth in 1988 and from a higher estimate of the economy's long-run growth potential. The change in the economic outlook reduces the projected deficits by $22 billion in 1988, an average of $35 billion per year in 1989 through 1992, and $23 billion in 1993.

SUMMARY TABLE 2. CHANGES IN BASELINE DEFICIT PROJECTIONS SINCE MARCH 1988
(By fiscal year, in billions of dollars)

	1988	1989	1990	1991	1992	1993
Winter Baseline	161	177	170	159	154	139
Changes:						
Enacted legislation	a	5	-1	a	a	a
Updated economic assumptions	-22	-35	-37	-34	-32	-23
Technical reestimates	15	a	5	6	5	5
Total Changes	-6	-29	-34	-28	-28	-18
Summer Baseline	155	148	136	131	126	121

SOURCE: Congressional Budget Office.

a. Less than $500 million.

Changes in technical estimating assumptions have increased projected outlays and the deficit in all years except 1989. This pattern reflects in part an expected delay in the refinancing of foreign military sales loans, which increases outlays by $3 billion in 1988 and reduces them by the same amount in 1989. Estimated spending for national defense and for deposit insurance has increased, while higher projected farm prices have reduced federal price and income support payments for farmers. Revenues have been revised downward every year to reflect a persistent shortfall in corporate income tax receipts.

Enacted legislation adds to the projected deficit by $5 billion in 1989 but has little effect in other years. CBO estimates that the Disaster Assistance Act will cost $5.1 billion in 1989. The Medicare Catastrophic Coverage Act (Public Law 100-360) marks the largest expansion of Medicare benefits since the program began; it is financed through increases in premiums and income taxes, however, and actually reduces the projected deficits slightly in the short run. Other recent legislation has had little effect on the budget totals.

ECONOMIC ASSUMPTIONS

The economy has grown more rapidly in the first half of 1988 than CBO and other forecasters previously expected. As a result, CBO's new forecast shows substantially stronger growth for 1988 as a whole than was projected last winter. CBO has also increased its estimate of the rate of growth of potential output. The projected level of the gross national product is therefore higher every year than it was in CBO's winter baseline.

Forecast for 1988 and 1989

In the wake of last October's stock market collapse, many forecasters expected that a reduction of inventory accumulation and a weakness in consumption would lead to a slowing in growth. But the slowdown did not materialize.

During the first half of 1988, real GNP grew at a 3.3 percent annual rate. Virtually all of the growth in final sales came from exports

and from business investment in plant and equipment. In CBO's short-term economic forecast for 1988 and 1989, net exports and business fixed investment are assumed to continue as the main sources of growth, though they grow more slowly than in the first half of 1988.

In the CBO forecast, the economy grows at a 2.5 percent average annual rate over the next 18 months. With the current low rate of unemployment and high rate of use of plant capacity, substantially faster growth than this is likely to cause rising inflation. On the other hand, actions by the Federal Reserve to raise interest rates and moderate growth could halt the reduction in the U.S. trade deficit and unintentionally produce a sharp economic slowdown. Further reductions in the budget deficit would help improve the trade deficit and ease the dilemma, but current policies produce little fiscal restraint in 1989.

The Federal Reserve's policy of moderate monetary tightening, begun in March, causes short-term interest rates to rise. This policy is assumed to be successful in limiting the growth in demand enough to avoid a sharp increase in inflation. Consumer prices nevertheless increase moderately faster in 1989 than in 1988 because of drought-related increases in food prices and, to a lesser extent, because of higher import prices. With growth near the estimated 2.7 percent growth rate of potential output, the unemployment rate stays at about 5½ percent. CBO foresees less real growth in 1989 than the Administration but more than the average of private-sector forecasts (see Summary Table 3). CBO's forecasts for inflation and interest rates are higher than the Administration's but close to the *Blue Chip* consensus.

Projections for 1990 through 1994

Beyond 1989, CBO's economic assumptions are not a forecast of future conditions but are projections based on past trends. In the projections, real GNP grows at an average annual rate of 2.3 percent in 1990 through 1994, and the civilian unemployment rate remains close to current levels. Because the projections are based on historical averages, they are consistent with the occurrence of one mild recession over the next six years.

SUMMARY TABLE 3. CBO, ADMINISTRATION, AND *BLUE CHIP* SHORT-RUN ECONOMIC FORECASTS
(By calendar year)

	1987[a]	Forecast 1988	Forecast 1989
Fourth Quarter to Fourth Quarter (Percent change)			
Real GNP			
CBO	5.0	2.6	2.7
Administration	4.0	3.0	3.3
Blue Chip	5.0	3.0	1.9
Nominal GNP			
CBO	8.3	6.4	7.0
Administration	7.4	6.6	7.1
Blue Chip	8.3	6.6	6.3
Consumer Price Index			
CBO[b]	4.5	4.4	5.0
Administration[b]	4.6	4.2	3.9
Blue Chip[c]	4.5	4.4	5.0
Calendar-Year Averages (Percent)			
Three-Month Treasury Bill Rate			
CBO	5.8	6.3	7.1
Administration	5.8	6.0	5.5
Blue Chip	5.8	6.5	7.0
Ten-Year Government Note Rate[d]			
CBO	8.4	8.9	9.1
Administration	8.4	8.5	8.1
Blue Chip	8.4	8.9	8.9
Civilian Unemployment Rate[e]			
CBO	6.2	5.5	5.5
Administration	6.1	5.5	5.2
Blue Chip	6.2	5.5	5.5

SOURCE: Congressional Budget Office; Office of Management and Budget; Eggert Economic Enterprises, Inc., *Blue Chip Economic Indicators* (August 10, 1988).

a. The national income data for 1987 were revised in July. The CBO and *Blue Chip* forecasts incorporate that revision, but the Administration forecast was prepared before the revision.

b. Consumer Price Index for urban wage earners and clerical workers.

c. Consumer Price Index for all urban consumers.

d. *Blue Chip* does not project a 10-year note rate. The values shown here are based on the *Blue Chip* projection of the AAA bond rate adjusted by CBO to reflect the estimated spread between AAA bonds and 10-year government notes.

e. The Administration's projection is for the total labor force, including armed forces residing in the United States, while the CBO and *Blue Chip* projections are for the civilian labor force excluding armed forces. In recent years, the unemployment rate for the former has tended to be 0.1 to 0.2 percentage point below the rate for the civilian labor force alone.

Summary Table 4 presents CBO's new economic projections and compares them with those of last winter. Because population trends will slow the growth of the labor force, the projected GNP growth for 1990 through 1994 is somewhat slower than the forecast for 1988 and 1989. Growth is also less than projected last winter, since the economy is now operating closer to full capacity. Despite the reduction in

SUMMARY TABLE 4. CBO SUMMER AND WINTER ECONOMIC PROJECTIONS (By calendar year)

		Forecast		Projections				
	1987	1988	1989	1990	1991	1992	1993	1994
GNP (Billions of current dollars)								
Summer	4,527	4,844	5,189	5,525	5,882	6,263	6,670	7,103
Winter	4,486	4,744	5,068	5,414	5,782	6,179	6,606	a
Real GNP Growth (Percent change)								
Summer	3.4	3.8	2.7	2.3	2.3	2.3	2.3	2.3
Winter	2.9	2.3	2.6	2.6	2.6	2.7	2.7	a
Implicit GNP Deflator (Percent change)								
Summer	3.3	3.1	4.3	4.1	4.1	4.1	4.1	4.1
Winter	3.0	3.4	4.1	4.1	4.1	4.1	4.1	a
Unemployment Rate (Percent)								
Summer	6.2	5.5	5.5	5.5	5.6	5.6	5.7	5.7
Winter	6.2	6.2	6.1	6.0	5.9	5.9	5.8	a
CPI-W (Percent change)								
Summer	3.6	4.1	4.9	4.6	4.4	4.4	4.4	4.4
Winter	3.6	4.5	4.9	4.6	4.4	4.4	4.4	a
Three-Month Treasury Bill Rate (Percent)								
Summer	5.8	6.3	7.1	6.8	6.6	6.3	6.1	5.9
Winter	5.8	6.2	6.7	6.6	6.4	6.1	5.9	a
Ten-Year Government Note Rate (Percent)								
Summer	8.4	8.9	9.1	8.7	8.3	8.0	7.6	7.4
Winter	8.4	9.3	9.5	9.0	8.4	7.8	7.4	a

SOURCE: Congressional Budget Office.

a. The Congressional Budget Office winter projections extended only through 1993.

the long-run growth rate, however, the higher growth rate in 1988 and an increase in the estimated growth rate of potential output causes the level of GNP to exceed CBO's previous projections in all years.

The long-run inflation and interest-rate assumptions differ little from those underlying CBO's winter baseline. The inflation rate as measured by the GNP deflator is projected to remain constant at an annual rate of 4.1 percent, close to the postwar average. The Consumer Price Index (CPI) grows slightly more rapidly, at 4.4 percent a year, because the CPI includes import prices, which are projected to rise, and excludes computer prices, which are going down. The three-month Treasury bill rate declines throughout the projection period until it reaches 5.9 percent--a level consistent with the average of real short-term rates since exchange rates began floating in 1973. Similarly, the 10-year government note rate declines until it reflects the average spread between short- and long-term rates.

While CBO's long-run economic projections are not based on any particular fiscal policy, the persistence of large budget and trade deficits together with low personal saving may make it difficult to reduce real interest rates to their historical averages. The declining interest-rate path assumed in the projections may be unachievable without reducing the federal deficit below the levels shown in CBO's baseline budget projections.

CHAPTER I

THE ECONOMIC OUTLOOK

The economy improved on several fronts during the first half of 1988: production expanded at a healthy pace, the merchandise trade deficit declined, and the unemployment rate fell to its lowest level since the early 1970s. The continuing strength of the expansion surprised many forecasters, including the Congressional Budget Office (CBO). These forecasters had thought that the October stock market crash, inventory accumulation, and other developments late last year would lead to a temporary slowdown in growth.

The current expansion has now gone on for five and a half years, making it the second longest on record in the postwar period. Moreover, encouraging signs are developing of a shift in the sources of economic growth--away from personal consumption and government purchases and toward business investment and exports--that should help sustain the expansion.

There are, however, reasons for concern about the short-term economic outlook--namely, the danger of an upsurge of inflation, and the possibility that restrictive policies to control inflation may halt the progress that has been made in reducing the trade deficit and cause a severe economic slowdown. Strong economic expansion has tightened labor and product markets so much that, unless growth slows down, the pressures are likely to force inflation upward. The Federal Reserve has raised interest rates to slow economic growth, but many analysts would prefer to see a tighter fiscal policy--that is, more effort to reduce the federal budget deficit--since this would permit lower interest rates. The dollar's rise this year may already have slowed the decline in the trade deficit, and higher interest rates may have been a contributing factor. Whether economic growth is restrained with monetary or with fiscal policy, however, there is a risk of unintentionally going too far and causing a recession.

Some analysts, on the other hand, are optimistic. A number of economic indicators suggest that inflation will not rise in spite of the drought and the low unemployment rate. Thus, policy may not need to be so restrictive in the future, and the economy could be allowed to grow faster.

CBO's short-term economic forecast for the remainder of 1988 and for 1989 lies between these pessimistic and optimistic extremes: it assumes there will be continued economic expansion, though at rates slightly below those of recent months, and a moderate near-term increase in inflation (see Figure I-1). Interest rates are anticipated to continue rising moderately over the next several months before leveling off. Gradual improvement in net exports helps to buoy the dollar for several more months, but eventually the exchange rate returns to a depreciating trend.

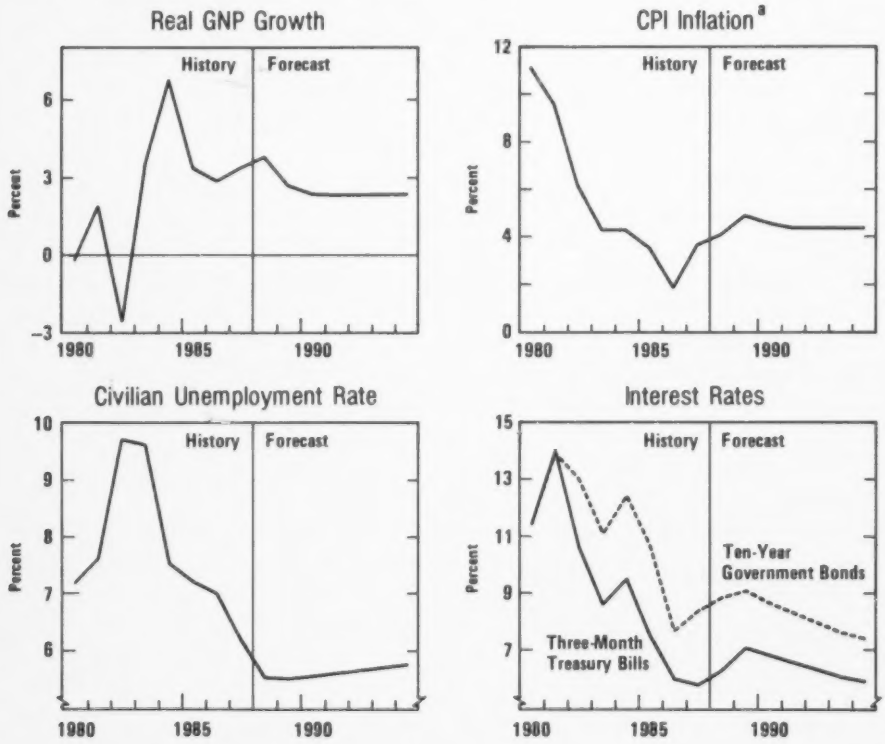
As background for a detailed presentation of the economic outlook, the first section of this chapter provides an analysis of fiscal and monetary policies in 1987 and early 1988. The second section analyzes the outlook for inflation, while the third section discusses important sources of economic growth during the first half of 1988, and how they can be expected to change during the forecast period. The chapter concludes with the economic forecast.

FISCAL AND MONETARY POLICY

The Congress and the Administration can affect overall domestic saving through fiscal policy--changes in federal spending and tax rules. Increasing saving by reducing the budget deficit helps slow the expansion of overall domestic demand, and is called "tight" or "restrictive" fiscal policy for that reason. The Federal Reserve, for its part, can manipulate economic growth through monetary policy--changes in short-term interest rates and monetary aggregates. A restrictive monetary policy comes about through increases in rates and slowing of money growth. Monetary policy can also affect the level of the dollar by carefully coordinating changes in interest rates with those in other countries, and by buying and selling dollars in foreign-exchange markets--usually in coordination with other central banks.

Fiscal and monetary policies in 1987 and early 1988 have played an important role in restraining domestic consumption, stabilizing the economy after the stock market crash, and promoting gradual depreciation of the dollar. The policy outlook at midyear 1988, however, presents new complications: the danger of increased inflation has be-

Figure I-1.
The Economic Forecast and Projections



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Federal Reserve Board.

[a] CPI-U from January 1983 to present; before that time the series incorporates a measure of homeownership conceptually similar to that of the current CPI-U.

come more immediate, while the depreciation of the dollar has been interrupted and partially reversed, threatening to halt recent declines in the trade deficit. Additional restraint by both monetary and fiscal policy may be needed to contain inflationary pressures and permit recent declines in the trade deficit and growth in business investment to continue. But monetary and fiscal policies are blunt instruments, and there is an inherent danger that restraint by either policy--while necessary to control inflation--may go too far, especially if export growth should slow unexpectedly.

Fiscal Policy

CBO's estimates of the federal deficit for 1988 and 1989 under present policies are roughly constant at about $150 billion. As Chapter II points out, these estimates are generally lower than those made by CBO last winter, largely because economic growth since then has been stronger than expected. The current estimates show a sharp decline in the absolute size of the deficit from the levels it reached a few years ago, and an even sharper decline in the deficit as a percentage of gross national product (GNP). The deficit continues to decline as a share of GNP during the current period, because GNP itself is growing. Until this year, however, the fall in the deficit relative to GNP has not been reflected in an increase in the country's saving; in fact, the improvement in the federal deficit has been more than offset by a decline in private saving (see Table I-1).

The Balanced Budget Act. The Balanced Budget Reaffirmation Act of 1987 mandates automatic spending cuts to reach a deficit target of $136 billion for 1989. As Chapter II points out, however, no such cuts are expected in 1989 even though CBO's baseline estimates are above the level intended to trigger the automatic reductions. This is because the cuts are determined on the basis of deficit estimates by the Office of Management and Budget (OMB), which are expected to be below the triggering level for 1989. For 1990 and later years, however, efforts to reach the deficit targets in the Balanced Budget Reaffirmation Act may well reduce the deficit below CBO's baseline.

Implications of the Deficit for the Economic Outlook. The short-term impact of the deficit on domestic demand is best measured, not by the deficit figures given above, but by estimates of the "structural" or

"standardized-employment" deficit expressed as a percentage of potential GNP. The standardized-employment deficit is the deficit adjusted for the effects of cyclical changes in the economy that do not reflect deliberate fiscal policy actions. In its most useful version, the standardized-employment deficit incorporates adjustments for asset sales and shifts in the timing of revenues and outlays that do not affect domestic demand in the short run.

Estimates of the yearly changes in the standardized-employment deficit incorporating these adjustments are shown in Table I-2. (The

TABLE I-1. NET SAVING FLOWS AS A PERCENTAGE OF GNP
(National income basis)

	(1) Net Private Domestic Saving	(2) State and Local Surplus[b]	(3) Federal Surplus[b]	(4) Net Domestic Saving (1) + (2) + (3)
1950-1959	7.5	-0.2	0.1	7.4
1960-1969	8.1	0.0	-0.3	7.9
1970-1979	8.1	0.8	-1.7	7.1
1980-1987	5.8	1.3	-4.0	3.1
1980	6.4	1.0	-2.2	5.1
1981	6.6	1.1	-2.1	5.7
1982	5.5	1.1	-4.6	2.0
1983	5.7	1.4	-5.2	2.0
1984	6.8	1.7	-4.5	4.1
1985	5.7	1.6	-4.9	2.4
1986	5.3	1.4	-4.8	1.9
1987	4.1	1.2	-3.5	1.8
1988[a]	4.6	1.1	-2.9	2.8

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

a. An estimate for the first half of 1988 based on available data.

b.. Minus sign indicates deficit.

corresponding levels are shown in Figure I-2.) The measure is projected to decline less in 1988 and 1989 than it did in 1987, suggesting a decline in fiscal restraint.

The Longer-Term Budget Outlook. CBO's baseline projections imply that, under current policies, the federal deficit will decline gradually as a percentage of GNP after 1989, from 2.5 percent in 1990 to 1.7 percent in 1994. But if the targets in the Balanced Budget Reaffirmation

TABLE I-2. CHANGES IN THE STANDARDIZED-EMPLOYMENT DEFICIT (By fiscal year, on a budget basis)

	1987	1988	1989	1990	1991	1992	1993	1994
Changes in Billions of Dollars								
Baseline Standardized-Employment Deficit	-68	32	-3	-14	-8	-8	-8	3
Adjusted for tax reform and other special factors	-34	-12	-6	-6	-1	-8	-9	-5
Standardized-Employment Deficit Reflecting Balanced Budget Act Targets[a]	-68	32	-3	-50	-39	-39	-31	n.a.
Percentage-Point Changes in Deficit Measures as a Percentage of Potential GNP								
Baseline Standardized-Employment Deficit	-1.7	0.5	-0.3	-0.4	-0.3	-0.3	-0.3	-0.2
Adjusted for tax reform and other special factors	-1.0	-0.4	-0.3	-0.3	-0.2	-0.3	-0.3	-0.2
Standardized-Employment Deficit Reflecting Balanced Budget Act Targets[a]	-1.7	0.5	-0.3	-1.1	-0.8	-0.7	-0.5	n.a.

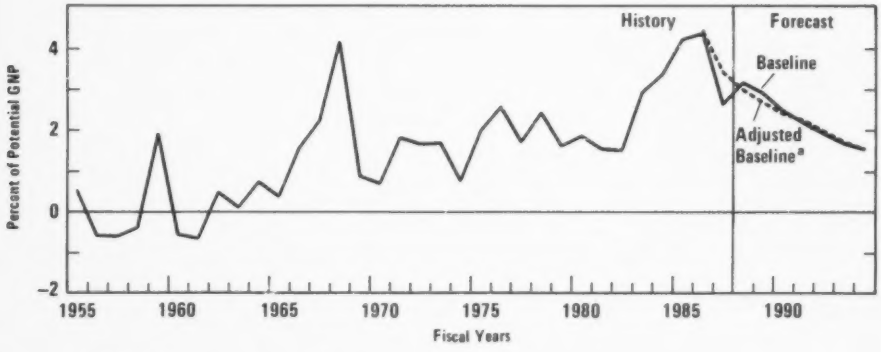
SOURCE: Congressional Budget Office.

NOTES: A negative sign indicates fiscal restraint--that is, a movement toward a smaller deficit.
n.a. = not applicable.

a. These calculations are estimates of the standardized-employment deficit based on the current CBO baseline economic projections. They assume full implementation of whatever deficit reductions are needed to achieve the budget targets for 1990 through 1993 set forth in the Balanced Budget and Emergency Deficit Control Reaffirmation Act of 1987. No adjustments are made for the nonrecurring effects of the 1986 Tax Reform Act and other special factors.

Act are met, the deficit would decline to 1.8 percent of GNP in 1990 and be eliminated in 1993. Under baseline assumptions, CBO projects that the federal debt will increase slightly from 42.6 percent of GNP in 1988 to 42.7 percent in 1989 before declining to 40.1 percent in 1994. The projected decline in the debt/GNP ratio is distinctly sharper under the Balanced Budget Act's targets, as Figure I-3 shows.

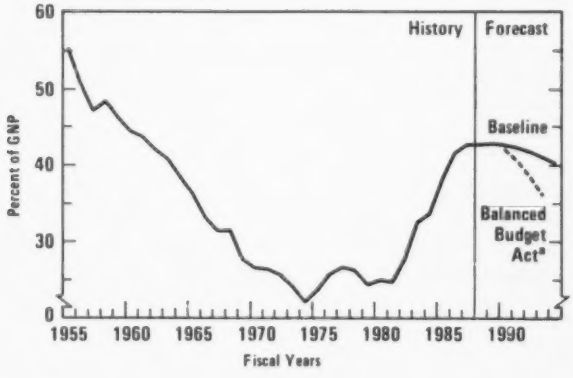
Figure I-2.
The Standardized-Employment Deficit



SOURCE: Congressional Budget Office.

[a] Adjusted for tax reform and other special factors.

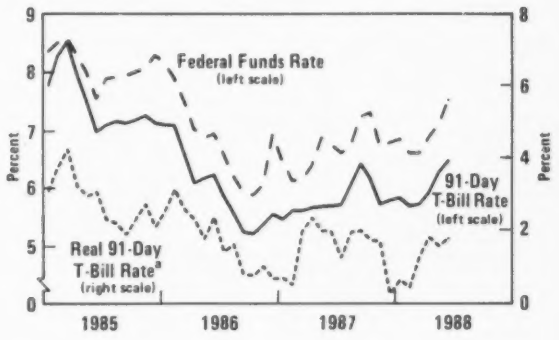
Figure I-3.
Publicly Held Federal Debt



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

[a] See footnote a, Table I-2.

Figure I-4.
Short-Term Interest Rates



SOURCES: Congressional Budget Office; Federal Reserve Board; Department of Labor, Bureau of Labor Statistics.

[a] The real 91-day Treasury-bill rate is the nominal rate less the annual rate of inflation over the next three months as measured by the Consumer Price Index.

Monetary Policy, Interest Rates, and the Dollar

Monetary restraint has been increasingly evident since March of this year, as reflected in rising short-term interest rates, and to a lesser extent in the recent strength of the dollar.[1]

Interest Rates and the Dollar. Short-term interest rates remained near their relatively low post-crash levels during the first quarter of 1988 (see Figure I-4), while the estimated real Treasury bill rate (the nominal rate minus the current rate of inflation) was well below pre-crash levels. However, the Federal Reserve tightened its policy between late March and August, in part through a 0.5-percentage-point increase in the discount rate, as signs appeared that economic growth was accelerating. Short-term interest rates rose by over one percentage point between early April and mid-August, putting them at the levels they had reached before the stock market crash. Long-term rates also rose over this period, and the stock market recovered.

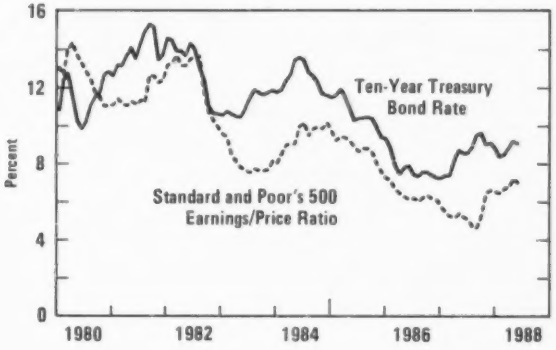
Developments in the stock and bond markets during the first half of 1988 were superficially reminiscent of those a year earlier, but the large discrepancy between movements in bond and equity prices that played an important role in the October stock market crash does not

1. For an extensive discussion of recent monetary policy, see *Monetary Policy Report to Congress Pursuant to the Full Employment and Balanced Growth Act of 1978* (Washington, D.C.: The Federal Reserve Board, July 13, 1988).

seem to have developed. The stock market rise has been accompanied by an increase in dividends and earnings, so that yields have not fallen as they did last spring and summer (see Figure I-5).

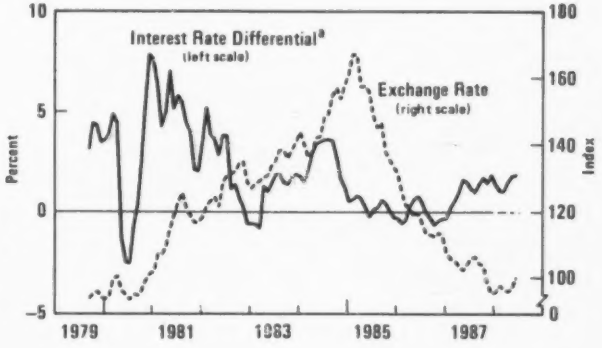
Interest-rate differentials with other countries narrowed during the first quarter, as U.S. and foreign central banks sought to accommodate demands for liquidity in the wake of the stock market crash. Nevertheless, the dollar remained firm because of massive support by U.S. and foreign central banks (see Figure I-6). Interest-rate differ-

Figure I-5.
Bond and Equity Yields



SOURCES: Congressional Budget Office; Standard and Poor's Corporation; Federal Reserve Board.

Figure I-6.
Interest Rates and the Exchange Rate



SOURCES: Congressional Budget Office; Federal Reserve Board; Data Resources, Inc.

[a] Treasury-bill rate relative to a five-country average of three-month Eurodollar rates.

entials widened in favor of the dollar after March, even though foreign monetary policies were tightened along with that of the United States.

The dollar appreciated 10 percent between April and early August (measured against the currencies of other major industrial countries), and this may significantly slow down progress in reducing the real U.S. trade deficit. The rise in the dollar resulted partly from favorable interest-rate differentials, together with reports that the merchandise trade deficit had declined. The rally may also have been caused in part by the suggestion at the Toronto economic summit that the Group of Seven industrial countries would intervene to keep the dollar from falling below what was then its current level. This reduced the fear of depreciation in the near future and encouraged investors to move funds to dollar-denominated investments.

Monetary Aggregates. In its midyear report to the Congress, the Federal Reserve reaffirmed its 1988 target ranges of 4 percent to 8 percent for the monetary aggregates M2 and M3. The central bank also announced tentative 1989 target ranges of 3 percent to 7 percent for the growth of M2 and 3.5 percent to 7.5 percent for M3. In keeping with the Federal Reserve's policy of gradually reducing the growth rates of the monetary aggregates, the midpoints of the 1988 target ranges are lower than the ranges for 1987, and the tentative 1989 ranges are below those for 1988. In any event, both M2 and M3 grew near the tops of their target ranges during the first three months of this year, though their growth fell toward the midpoints of the ranges after March (see Figure I-7).

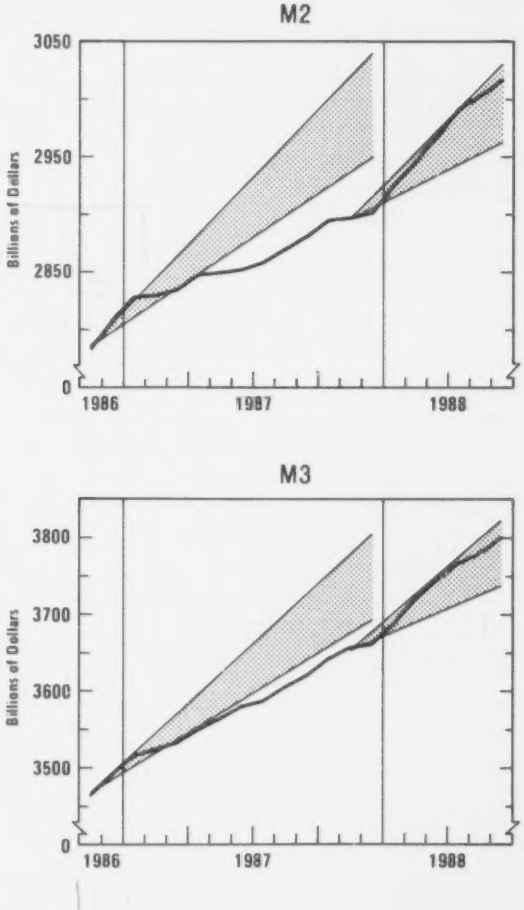
The usefulness of the monetary aggregates as short-term indicators of Federal Reserve policy has been reduced in recent years by an increase in the short-term variability of their relationship to GNP, known as monetary velocity. In fact, this problem is so severe for the narrowest aggregate, M1, that the Federal Reserve no longer announces target ranges for its growth. But the long-term velocities of M2 and M3 are likely to be more stable, so that the relationships between the growth rates of these aggregates and that of nominal GNP are more predictable.

The Outlook for Interest Rates and the Dollar. CBO projects that short-term interest rates will continue rising gradually over the next

several quarters before stabilizing in 1989. A smaller rise in long-term rates is expected. The dollar is projected to remain roughly stable in nominal terms at least through the third quarter of 1988, but then to resume depreciating at a rate of 3 percent to 4 percent a year against the currencies of other industrial countries. The renewed decline reflects persistent U.S. current-account deficits coupled with reduced freedom of other central banks to intervene heavily in the

Figure I-7.

Money Growth and Targets in 1987 and 1988



SOURCES: Congressional Budget Office; Federal Reserve Board.

NOTE: Shaded areas indicate target ranges. The range for both M2 and M3 was 5½% to 8½% in 1987, and is 4% to 8% in 1988. M2 includes M1 (currency in the hands of the public, travelers' checks, checkable deposits) plus small time and savings accounts, money-market deposit accounts, many money-market mutual funds, many repurchase agreements, and overnight Eurodollars held by U.S. residents. M3 includes M2 plus large time deposits and repurchase agreements, institution-only money-market deposit accounts, and term Eurodollars held by U.S. residents.

exchange market, since their recent heavy support of the dollar has increased money growth in some countries to rates that could heighten inflationary pressures.

The outlook for interest rates, the dollar, and net exports would be improved if the budget deficit were to decline more sharply. The decline in fiscal restraint forecast for the next year places the burden of slowing domestic demand more heavily on interest-rate increases engineered by monetary policy. Unlike fiscal restraint, however, monetary retrenchment risks reducing investment. It also risks slowing the decline in the trade deficit, since increases in interest rates, if not carefully coordinated with monetary actions in other countries, may cause the dollar to appreciate. There is some evidence that this has already happened.

INFLATION

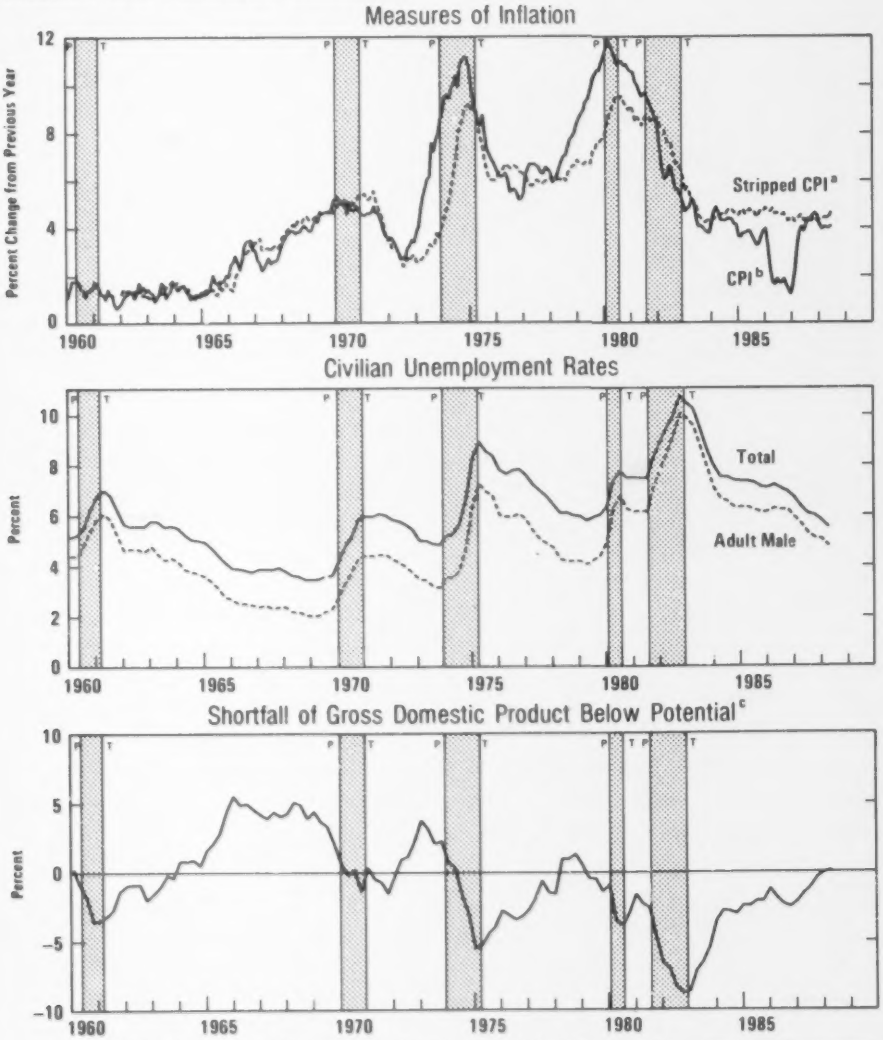
The growth of production in the United States in the past four years has averaged 4 percent and has been accompanied by a large fall in unemployment without, as yet, a significant increase in inflation (see Figure I-8).[2] But several signs suggest that capacity utilization and the labor market are now sufficiently tight that further rapid growth in the economy will not be possible without increased inflation. Some temporary factors--the recent drought, and increases in prices of imported goods--are also likely to push up the rate of price increases temporarily. This section discusses each of these factors in turn.

Has the Economy Reached Potential Output?

The economy's output has no clear limit at any given time, since if sales are sufficiently good, businesses can usually find additional resources--though at higher costs. But it is useful to think of the

2. These estimates of growth in production refer to real gross domestic product (GDP), which includes only production in the United States. Gross national product also includes net investment earnings from foreign assets, which have been falling recently. Thus, real GDP grew 3.7 percent in the first half of 1988, while real GNP grew 3.3 percent.

Figure I-8.
Inflation and Resource Utilization



SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics; Department of Commerce, Bureau of Economic Analysis.

[a] CPI-U excluding food, energy, and used cars.

[b] CPI-U from January 1983 to present; before that time the series incorporates a measure of homeownership conceptually similar to that of the current CPI-U.

[c] The gross domestic product gap is the difference between actual and potential real gross domestic product. The Congressional Budget Office's method of calculating potential GDP is detailed in Appendix B of *The Economic and Budget Outlook: An Update* (August 1987).

economy's potential output as the highest level of gross domestic product (GDP) that can be reached without causing a sustained acceleration of inflation. The estimated growth rate of potential GDP is currently about 2.7 percent--substantially below the growth rate of the economy last year, and lower than the growth in the first half of 1988.[3] GDP was very close to the estimated noninflationary potential of the economy in the second quarter of 1988. The unemployment rate--5.3 percent in June--was also just below many recent estimates of the level at which tight labor markets would be likely to spur inflation--the so-called NAIRU (the nonaccelerating inflation rate of unemployment).[4]

Consumer prices have not yet shown a sharp increase in inflation. The Consumer Price Index (CPI), excluding food and energy prices, increased in the first half of 1988 at a rate close to the 4½ percent range in which it has been for the past four years (see Figure I-8). Similarly, the Producer Price Index for finished consumer goods less food and energy increased only slightly faster in the first half of 1988 than it had in 1987, and the fixed-weight GNP deflator also remained close to its earlier range.

But consumer-price inflation will probably accelerate if growth continues at rates above the growth rate of potential output, though it is hard to know how much or how soon. The economy operated substantially above estimated potential output for four years in the late 1960s, and inflation rose from about 1½ percent in 1965 to about 4½ percent in 1970--serious enough to prompt the imposition of wage-price controls in 1971. Briefer episodes of high demand, coupled with shocks to the supply of food and energy, quickly produced much sharper increases in inflation in the 1970s.

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3. The calculations that underlie the Congressional Budget Office's estimates of potential output are described in Appendix B of *The Economic and Budget Outlook: An Update* (August 1987).

4. Ibid.

The Labor Market

The labor market tightened substantially in the first half of 1988, as unemployment fell to 5.3 percent of the civilian labor force in June (the lowest rate in 14 years) and wages began to show signs of acceleration for the first time in several years (see Figure I-8). Payroll employment rose at a rate of 3.6 percent from December to July, substantially faster than the 2 percent to 2¼ percent rate that prevailed in 1986 and the first half of 1987.

The growth in employment has been widespread since early 1987, even in manufacturing industries exposed to foreign competition, where employment declined in the preceding two years. Unemployment has fallen most in states--such as Ohio, Illinois, and Michigan--that have benefited most from the decline in the dollar.

Wages in June were up 3.7 percent from a year earlier, a significant acceleration from recent increases (see Figure I-9 and Table I-3). Other employment costs (fringe benefits and Social Security taxes) increased even more sharply. Even with the recent acceleration, however, the growth of nominal wages has lagged behind that of prices, in part because wages have not yet caught up to the price increases of the past year. In addition, until recently, unemployment rates remained quite high, and foreign competition, despite the fall in the dollar, remained stronger than expected. Now, however, with a tighter labor market and larger increases in the prices of imported goods (discussed below), wage growth is expected to accelerate moderately.

Factors Contributing Temporarily to Price Increases

Three other factors are likely to contribute temporarily to higher price increases: increases in food prices because of the drought, increases in import prices because of the weakness of the dollar, and increases in oil prices.

The Drought. The drought that started in late spring appears to have significantly reduced the 1988 harvest of corn, spring wheat, oats, barley, and soybeans. This report was prepared before U.S.D.A.'s mid-August assessment of the severity of the drought, which was signif-

Figure I-9.
Employment Cost Index

SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics.

icantly worse than was previously thought. Although the full effects of the drought could not yet be assessed, some aspects were already evident:

- Agricultural output has fallen sharply.
- Corn, wheat, and soybean prices are up sharply, and show larger than usual volatility because of the uncertainty of the final effect of the drought on production and stocks.
- Scorched grazing pastures and sharply higher feed prices may have led farmers to increase cattle slaughter rates, cutting back on a herd size that was already very small and temporarily reducing beef prices.
- Poultry prices are up because of higher feed costs and continued strong demand.

The drought is expected to affect not only consumer food prices but electricity prices as well. Low water levels have forced some utilities to abandon low-cost hydropower.

Higher prices for cereals, oils, and breads are expected to raise total consumer food prices by one-half percent to 1 percent this year. Consumer meat prices, however, will be affected more seriously.

Higher than anticipated slaughter rates during the early summer will moderate the increase in beef prices this year, but lead to tighter supplies and higher prices next year, when food prices are expected to rise about 6 percent, compared with increases of 4.2 percent in 1987 and about 4 percent in 1988.

TABLE I-3. NOMINAL WAGE AND COMPENSATION RATES IN THE NONFARM PRIVATE SECTOR (Percent change from corresponding quarter of previous year)

	1985 IV	1986 IV	1987 IV	1988 I	1988 II
Compensation					
Compensation per Hour[a]	4.5	4.2	4.1	4.4	4.6
Employment Cost Index[b]	3.9	3.2	3.3	3.9	4.5
Union	2.6	2.1	2.8	3.9	4.3
Nonunion	4.6	3.6	3.6	4.0	4.5
Wages and Salaries					
Average Hourly Earnings Index[c]	3.1	2.4	2.6	2.9	3.3
Employment Cost Index[b]	4.1	3.1	3.3	3.3	3.7
Union	3.1	2.0	2.6	2.6	2.9
Nonunion	4.6	3.5	3.6	3.5	4.0
Manufacturing	3.6	3.3	3.4	3.6	3.8
Nonmanufacturing	4.5	3.0	3.4	3.1	3.8
Service-producing	4.7	3.0	3.5	3.1	3.7
Goods-producing	3.5	3.2	3.2	3.5	3.8

SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics.

a. Quarterly data, not adjusted for overtime or for changes in the mix of industries or occupations.

b. Adjusted for overtime and for changes in the mix of industries and occupations; not seasonally adjusted.

c. Adjusted for overtime in manufacturing and for changes in the mix of industries.

BOX I-1
EFFECT OF DROUGHTS ON OUTPUT AND PRICES

The ultimate effect of this summer's drought on growth of the economy and consumer prices will not be clear until after this report is released. In the meantime, one way of estimating the effect is to examine the economic consequences of the last severe drought in 1983.

The 1983 drought coincided with a government program (Payment-in-Kind, or PIK) that also cut production by sharply reducing acreage planted. The drought reduced corn yields from 113 bushels per harvested acre in crop year 1982 to 81 bushels in 1983. Real farm product in calendar year 1983 fell 20 percent--the largest percentage decline in postwar years. The slump in the farm sector reduced real growth in the economy by half a percentage point, of which about half was caused by the drought.

Production cutbacks in 1983 resulted in higher feed costs for livestock producers and caused poultry prices to rise. The same factor led to increased slaughter of cattle and hogs that caused red meat prices to fall in 1983, but contributed to food price pressures in 1984. Total consumer food-at-home prices rose only 1.1 percent in 1983 and 3.7 percent in 1984. This price pattern was not fully attributable to the drought: prices of fruits and vegetables, which were much less affected by the drought, remained constant in 1983 and rose sharply in 1984.

The 1988 drought will probably affect farm output at least as much as did the 1983 drought. Many analysts expect corn yields in 1988 to suffer as much or more, since the 1988 drought started earlier in the growing season and affected the pollination as well as the maturation of corn. The 1988 drought has also affected a wider area and will probably destroy over half of the spring wheat crop, which was less affected in 1983.

Slaughters of cattle and hogs may not occur on the same scale this time as they did in 1983. The current cattle herd is at its smallest since 1961, and market expectations of higher cattle prices next year will encourage ranchers to conserve their herds. In addition, the government has been releasing corn from its Commodity Credit Corporation stocks since late June, and has established emergency programs that provide subsidized feed to livestock farmers. Analysts disagree on the extent to which these factors will limit drought-induced slaughters in 1988, though they generally agree that next year's beef supplies will be tighter and prices higher. Not only will higher feed prices raise the costs of fattening cattle in early 1989, but ranchers also will want to rebuild their herds.

Import Prices. The growth in import prices has increased sharply in recent quarters, but has not matched the depreciation of the dollar since early 1985 (see Figure I-10). Several factors help explain the sluggish growth of import prices:

- Costs of production, and therefore prices of traded goods, have risen less than consumer prices in the countries with which the United States trades.
- Foreign exporters have absorbed some of the fall in the exchange rate in reduced profits.
- A larger and larger share of imports is coming from newly industrialized countries such as Korea and Taiwan, whose currencies have not moved as much against the dollar as have European and Japanese currencies.

The potential for further foreign cost cutting and profit reduction is limited, however, so that import prices are expected soon to reflect changes in the exchange rate more fully.

Oil Prices. Disagreements among members of the Organization of Petroleum Exporting Countries (OPEC) and other oil producers resulted in downward pressure on oil prices during the first half of

Figure I-10.
Foreign Prices and U.S. Import Prices

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; International Monetary Fund.

[a] Foreign prices converted to U.S. dollars for 18 countries weighted by shares in U.S. nonpetroleum imports.

[b] Fixed-weight price index for nonpetroleum merchandise imports.

1988. Meetings of oil producers in April and June failed to reach agreements on restricting production that would have lifted the price toward the OPEC target of $18 from its range of $13 to $15 in mid-1988. Only the ability of the OPEC cartel to limit production sustains prices above the level of less than $10 that would otherwise be set by production costs.

The outlook for oil prices is complicated by political uncertainties. The move toward a cease-fire in the Persian Gulf war could, in principle, reduce oil prices further by making it easier to transport oil through the Gulf. On the other hand, if declining tensions make it easier for Iran and Iraq, both OPEC members, to agree on production policies, prices could increase. Under the circumstances, few analysts venture predictions on oil prices with any confidence. However, with continued economic growth in the United States and in other major industrial countries, agreement on production and pricing policies for oil could become easier, and real oil prices are expected to rise in the long run.

THE CHANGING COMPOSITION OF GROWTH

During much of the 1980s, the economy's growth was sparked by consumer and government spending: the personal saving rate generally declined, and government deficits rose sharply. As a result, the share of net national product (NNP) devoted to net investment and net exports--the two kinds of spending that most directly determine the potential future growth of income--dropped to a record postwar low in 1986 (see Figure I-11).[5] The picture has improved in the last year and a half, and especially in the last two quarters, when virtually all of the growth in final sales came from business fixed investment and net exports. But net investment and net exports remain a much lower share of NNP than in the 1960s or 1970s.

5. Net national product is the portion of gross national product available for purposes other than maintaining the existing capital stock: that is, GNP less depreciation. Net investment is gross investment less depreciation. Net exports are exports less imports, currently a large negative number; they are approximately the same as net lending abroad (or currently, net borrowing from foreigners). Other, more precise measures of net borrowing are used in other parts of this report.

Three interrelated factors have contributed to the recent improvement in net investment and net exports as a share of NNP:

- The dollar has fallen about 40 percent in both real and nominal terms since its peak in early 1985, dramatically improving the competitive position of U.S. producers while cutting into the real incomes of U.S. consumers.
- The stock market crash of October 1987 erased a year's increase in the value of equities held by households, leading to somewhat higher household saving.
- Federal fiscal policy tightened, with the standardized-employment deficit dropping from 4.4 percent of potential GNP in fiscal year 1986 to 3.4 percent in 1987 and 3.0 percent of potential GNP in 1988.

Fixed Investment

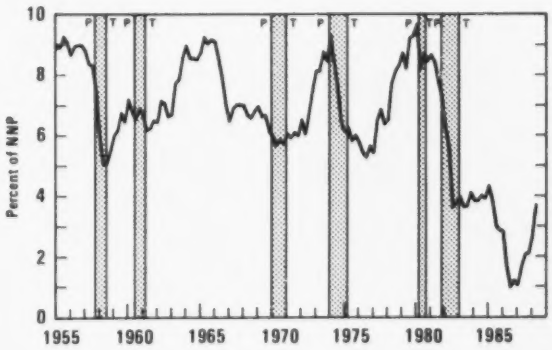
The recent strength of fixed investment has been the result of business spending--specifically for computers and other categories of producers' durable equipment. Housing starts remained relatively depressed, particularly multifamily starts, which have been affected by the fall-

Figure I-11.

The Share of Investment and Net Exports in Output

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

NOTE: Net fixed investment plus net exports as a percent of net national product.

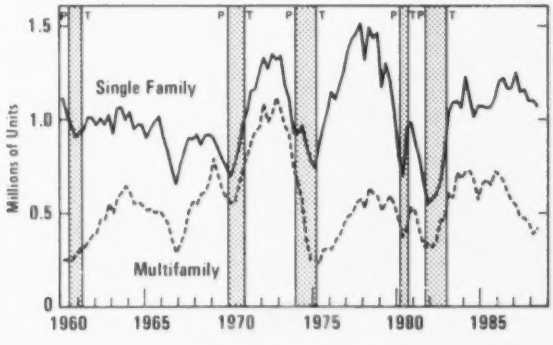


ing rate of new household formation among the young and by changes in the tax treatment of investment in structures (see Figure I-12).

After last October's stock market plunge, many analysts regarded the outlook for gross business fixed investment as bleak because of weakened business confidence. Since the fourth quarter of 1987, however, real business fixed investment has grown at an annual rate of 10.8 percent. Equipment purchases surged at a 22 percent annual rate in the first quarter of 1988, paced by extraordinary growth in spending for office equipment and, to a lesser extent, by purchases of motor vehicles. Following one quarter of decline, plant spending grew 11.8 percent in real terms during the second quarter.

Most advance indicators point to continued high levels of capital spending, at least through this year (see Table I-4). Capacity utilization rates have risen, and in manufacturing they now exceed the rates reached at four out of the last eight cyclical peaks. Healthy growth in new orders for equipment continued into 1988, and unfilled orders rose at a 17 percent rate in the first half of the year. Capital spending surveys have found that plans for expansion are widespread among industries. The Commerce Department's spring survey of company spending plans for plant and equipment shows a healthy 10.7 percent nominal expansion for 1988. The April-May response to the McGraw-Hill survey shows nominal business investment advancing 9.9 percent. Both surveys indicate that spending plans have been revised upward since late last year.

Figure I-12.
Housing Starts



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of the Census.

TABLE I-4. CURRENT INDICATORS OF BUSINESS FIXED INVESTMENT AND SURVEYS OF CAPITAL SPENDING PLANS FOR 1988

	1986	1987	1987 I	1987 II	1987 III	1987 IV	1988 I	1988 II
Current Indicators								
Real Nondefense Capital Goods Orders (Billions of 1982 dollars per month)	30.0	33.5	30.5	33.6	34.6	35.4	38.6	37.7
Capacity Utilization (Percent)	79.4	80.7	79.5	79.9	81.2	82.1	82.4	82.9
Corporate Economic Profits (Billions of dollars, annual rate)[a]	299	310	298	305	322	316	316	n.a.
Corporate Cash Flow (Billions of dollars, annual rate)[b]	387	379	372	374	385	384	387	n.a.
Corporate AAA Bond Rate (Percent)	9.0	9.4	8.4	9.2	9.8	10.2	9.6	9.8
Standard & Poor's 500 Stock Price Index (Percent change, annual rate)	26.5	21.4	72.6	21.6	40.6	-59.2	4.4	8.0

Surveys of Capital Spending Plans for 1988
(Percent increase)

	Nominal	Real
Department of Commerce[c]	10.7	11.9
McGraw-Hill[c]	9.9	5.3

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; McGraw-Hill, Inc.; Conference Board; Federal Reserve Board.

NOTE: n.a. = not available.

a. Economic profits are adjusted for inventory valuation and capital consumption adjustments.

b. Corporate cash flow is the sum of retained earnings, capital consumption allowance at book value, and the inventory valuation adjustment.

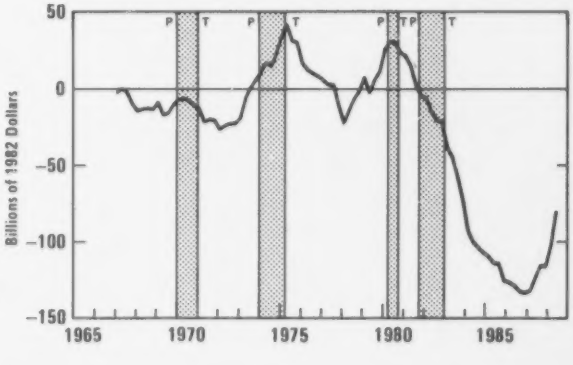
c. Conducted in April and May 1988.

Because of increased depreciation, the long-run trend in net investment is less favorable than that of gross investment: an increased share of equipment investment has gone to relatively short-lived assets, such as autos and computers, while investment in structures has been a reduced share of the whole. Shorter-lived capital depreciates faster. This shift to shorter-lived assets is a long-term trend that accelerated in the 1980s. One important factor is the dramatic technological improvement in computers, which has increased their importance in business investment.

Foreign Trade

The improvement in real net exports of goods and services that began in 1986 continued in the first half of 1988 (see Figure I-13). Even nominal net exports began to improve this year for the first time since the dollar began depreciating in early 1985. (A related measure, the current account in the balance-of-payments accounts, has not improved as much because it includes capital gains that are not reflected in the measurement of net exports.) The net export deficit remains high in both real and nominal terms, however, and the dollar's appreciation in 1988 is likely to offset at least some of its recent decline. Indeed, many economists believe that increased saving by consumers or the government will be needed to reduce the trade deficit by any significant amount.

Figure I-13.
The Turnaround in Trade



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

NOTE: Exports of nonagricultural, noncomputer goods and services less imports of nonpetroleum, noncomputer goods and services.

Competitiveness. Recent improvement in the trade balance reflects gains in competitiveness from the depreciating dollar, relatively slow growth in U.S. wages, and increases in manufacturing productivity. Since its peak in early 1985, the dollar has depreciated about 40 percent in both real and nominal terms relative to the currencies of major U.S. trading partners. Moreover, productivity growth in U.S. manufacturing has been relatively strong; and with moderate wage growth, unit labor costs have been kept down to an annual growth rate of about 2 percent to 3 percent. The benefits have been most evident in exports, which are on a rapid upward trend: real nonagricultural exports grew by 24.3 percent (at an annual rate) in the first half of 1988. This exceptional growth may slow, however, in part because of the 10 percent appreciation of the dollar since April.

Improvement on the import side has been slower, largely because import prices increased only sluggishly, but real imports of consumer goods began to fall in the first half of 1988. Overall, increases in capital goods imports have kept imports rising in both real and nominal terms.

Investment Income. Part of the deterioration in the current-account balance in the first half of 1988 resulted from a deterioration in the balance of investment income flows (that is, the income U.S. residents earn on their overseas assets, less what foreigners earn on their assets located in the United States). This balance will probably continue on a downward trend as long Americans keep borrowing from foreigners, which means as long as the current account remains in deficit.

Net Exports and Domestic Saving. The trade balance may not continue to improve at recent rates without further changes in government fiscal policy. Many analysts describe the chronic current-account deficit as reflecting dissaving--that is, it shows the excess of domestic spending, primarily for consumption, over income from production. Recent improvement in the trade picture has come mainly from increases in production as the depreciating dollar has stimulated exports; to a lesser extent, it stems from reduced spending as the falling dollar has increased consumer prices for imported goods, cutting real incomes. But since the economy is now much closer to capacity than it was three years ago, it may not be able to continue to expand at recent rates. Additions to capacity from government and

private investment will at best be slow. Any continued improvement in the current-account balance may therefore require additional domestic saving, either by consumers or through a further reduction in the budget deficit.

Consumption

Growth in consumption has slowed since the end of 1986, at first because of slower growth in real disposable income, and later because of increases in the rate of saving out of disposable income. From 1982 to 1986, consumption grew at a rapid average rate of 4.6 percent. While consumption of services has continued to increase since 1986, and auto purchases have swung widely with changes in sales incentives, other categories of consumer spending have grown little since 1986.

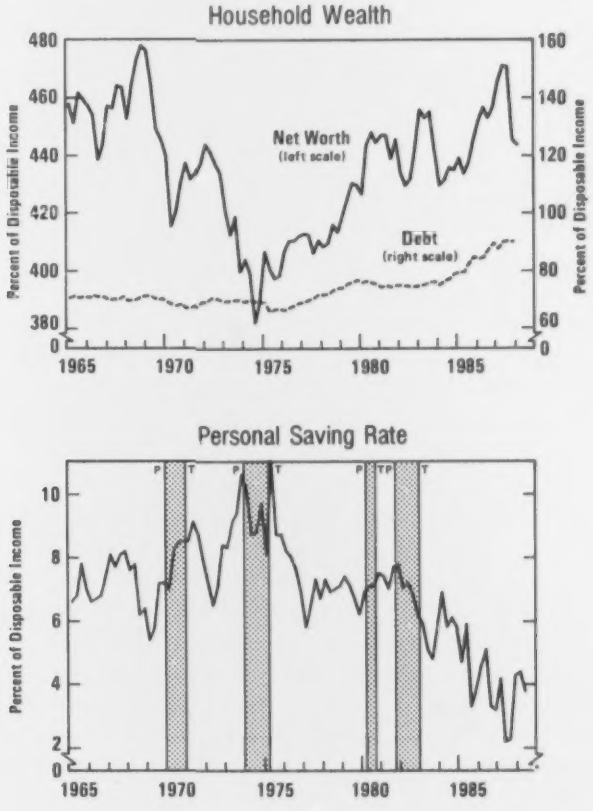
The Saving Rate. The personal saving rate continued to decline through the third quarter of 1987, until the stock market crash (see Figure I-14). As a consequence of the long period of low saving, the ratio of personal debt to income has reached an all-time high. Although household net worth--buoyed by stock market and real estate gains--has also risen, the present debt/income ratio implies serious risks of default by households with little liquid wealth if an unexpected reduction in income or a sharp increase in interest rates should make it more difficult for them to service their debts. So far, however, delinquencies on mortgages and installment loans remain within normal ranges.

Consumer confidence plummeted and the personal saving rate increased sharply right after the stock market crash. The saving rate in the national income and product accounts (NIPA) went from 2.3 percent in the third quarter of 1987 to 4.3 percent in the fourth quarter. Much of this increase, however, reflected the end of special incentives to buyers of cars, which reduced car sales and raised saving. The effects of the crash on consumption were expected to persist into this year, reducing the growth of consumption further below the relatively low rate experienced in 1987. But real income growth in the first half of 1988 greatly exceeded expectations. As a result, although the saving rate remained above its pre-crash level, consumption grew

quite sharply. Renewed auto incentives accounted for about a fourth of this growth, but purchases of services rose at a 3.9 percent rate in the first half of the year.

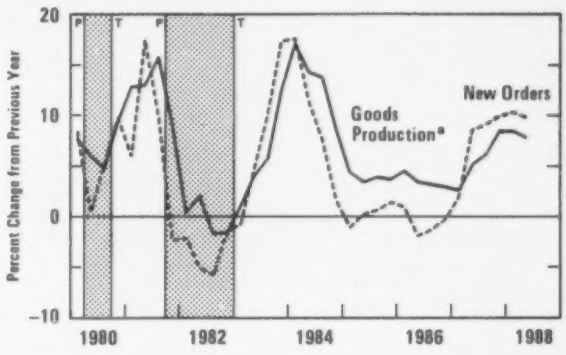
The personal saving rate continues to be relatively low, even after its recent rise, and is likely to remain close to its recent range. CBO does not expect it to resume the declining trend that it showed during

Figure I-14.
Household Saving and Wealth



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Federal Reserve Board.

Figure I-15.
Goods Production and New Orders



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

* Sales of goods plus inventory accumulation less imports of goods.

the period up to mid-1987, however, because some of that decline was driven by the boom in the stock market, which is not likely to recur.[6]

Inventory Accumulation

Inventory accumulation was rapid at the end of 1987. The rate of accumulation has since slowed, and the remaining inventory surplus will probably not lead to a sharp reduction in production for two reasons:

- Orders remain strong, as they have since early 1987, suggesting both that retailers do not feel that their inventories are too large and that manufacturers will not soon change their rate of production;

- The recent accumulation of inventory does not seem to have been the result of an unexpected downturn in sales growth, as had been true just before previous sharp inventory adjustments; instead, it followed a sharp upturn of production growth in mid-1987 that coincided with an increase in the growth of orders (see Figure 1-15).

6. See Congressional Budget Office, *The Economic and Budget Outlook: Fiscal Years 1989-1993* (February 1988), p. 19.

Some analysts believe that any inventory correction will be focused on imports, implying little reduction in domestic production. Anecdotal evidence suggests that an unusually large proportion of recent inventory accumulation has been accounted for by imported goods, perhaps in anticipation of import price increases. If this is true, it could help explain why orders for domestically produced goods have remained strong.

The Public Sector

Real government purchases (excluding the activities of the Commodity Credit Corporation) showed almost no growth in the first half of 1988, a sharp change from the more than 4 percent growth experienced in each of the past four years. This slowing resulted from a decline in real federal defense purchases, while state and local spending kept pace with GNP growth.

Farm inventories recorded in the national income accounts as held by the Commodity Credit Corporation (CCC) dropped at a $19 billion rate in the first half of 1988, the largest two-quarter decline on record. Part of this reduction in inventory reflected the drought, which has led farmers to pay off loans secured by corn and other grain inventories. However, the full impact of the drought on CCC inventories has yet to be felt.

FORECASTS AND PROJECTIONS

CBO's economic forecast extends through the end of calendar year 1989, and provides the economic assumptions CBO uses in its budget projections for fiscal year 1989. The forecast reflects CBO's judgments on the effect on the economy of such recent developments as higher commodity prices, the drought, and movements in the exchange rate and import prices.

For the subsequent 1990-1994 period, CBO makes no forecast. Instead, the budget projections for that period are based on economic projections that are more mechanically constructed, using historical

averages of growth rates and relationships among a few key variables.[7] In brief, the gap between real GDP and potential GDP is assumed to revert smoothly to historical average levels by the end of the projection period, as is the real interest rate, while inflation rates are assumed to remain constant at slightly below their historical averages throughout the 1990-1994 period. These projections incorporate average fiscal and monetary policy over the years since World War II, and the average historical experience of economic recessions or of supply shocks such as the 1974 or 1979 oil crises and the more recent declines in oil prices. For that reason, the absence of an explicit recession in the out-year projections does not mean that CBO assumes no recession will occur between now and 1994: instead, the historical average roughly reflects the fact that recessions have occurred once in five years on average.

The Short-Term Forecast

The short-term economic forecast shows moderate growth through the end of 1989 and describes an economy operating close to its potential (see Table I-5). The forecast assumes that the Federal Reserve's policy of moderate monetary tightening limits real growth of domestic demand to rates that will avoid a sharp increase in inflation. The Federal Reserve is assumed to allow short-term interest rates to rise more than long-term rates, thus flattening the yield curve. Unemployment remains close to current rates.

Inflation. Largely because of drought-related increases in food prices, consumer prices are forecast to increase moderately faster in 1989 than in 1988. Import price increases are also expected to push up consumer prices, though the recent strength of the dollar has reduced the near-term growth of import prices so that they are not expected to be as much of a factor as in previous CBO forecasts. The unemployment rate is now low enough to imply some moderate acceleration in wage rates. But real wage rates are likely to fall in 1988 and 1989.

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7. The procedure for constructing these out-year projections was described in Appendix B, Congressional Budget Office, *The Economic and Budget Outlook: Fiscal Years 1989-1993* (February 1988).

Sources of Growth. Net exports and business fixed investment are the main sources of economic expansion through the forecast period, though they grow more slowly than in the first half of 1988. Excluding factor income flows--net income on foreign investments--real net exports are forecast to increase by $67 billion in 1988, in large part because of past sharp declines in the dollar. The more recent strength of the dollar causes the rate of improvement in net exports to slacken somewhat in 1989, to about $16 billion. Business fixed investment also contributes to growth, not--as in the first half of 1988--through extraordinary increases in computer purchases but through the broad advance in capital spending indicated by this spring's surveys on capital spending.

Though net exports improve substantially in the forecast, the current-account balance remains seriously in deficit. As a result, the net

TABLE I-5. THE CBO FORECAST FOR 1988 AND 1989

	Actual		Forecast	
	1986	1987	1988	1989
Fourth Quarter to Fourth Quarter (Percent change)				
Nominal GNP	4.8	8.3	6.4	7.0
Real GNP	2.0	5.0	2.6	2.7
Implicit GNP Deflator	2.8	3.1	3.7	4.2
CPI-W[a]	0.9	4.5	4.4	5.0
Calendar-Year Averages (Percent)				
Unemployment Rate	7.0	6.2	5.5	5.5
Three-Month Treasury Bill Rate	6.0	5.8	6.3	7.1
Ten-Year Government Bond Rate	7.7	8.4	8.9	9.1

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics; Federal Reserve Board.

a. Consumer Price Index for urban wage earners and clerical workers.

external debt of the United States and the net income on investments continue to deteriorate. The expected decline in net investment income reduces the real GNP growth rate by an average of 0.2 percentage point below the growth rate of gross domestic product in 1988 and 1989.

In 1988, consumer spending increases at about a 2½ percent rate, slightly below the 1987 rate and well below the 4½ percent rate that prevailed in the preceding three years. In 1989, growth in consumption is further restrained by relatively slow growth in real disposable income, since the increase in consumer prices is not fully matched by wage increases.

The Drought. The current drought affects the forecast in several respects: agricultural production is reduced in 1988 by about 0.3 percent of GNP (mostly in the second half); food prices are increased in 1988 and 1989 by about one-half percent and 1½ percent, respectively, adding about 0.3 percentage point to the growth of the CPI and the GNP deflator in 1989; agricultural export prices are increased sharply, thus bringing a temporary boost to the current-account balance of payments; and farm inventories are cut sharply in 1988.

The outlook for 1989 assumes a return to normal weather and crop yields, coupled with increased acreage planted, that will boost agricultural production in 1989. On the other hand, livestock farmers, with herds at low levels even before the drought-induced slaughtering, are expected to rebuild their herds, thus making meat supplies lower than normal.

Comparison with CBO's Winter 1988 Economic Outlook. Because the economy has already grown more rapidly in the first half of 1988 than previously expected, the current forecast calls for substantially stronger economic growth in 1988 than did CBO's winter 1988 forecast (see Table I-6). The present forecast sees inflation in 1988 as being slightly lower than was expected last winter, but the stronger economy and higher food prices will push up consumer prices slightly in 1989 relative to the winter forecast. With less short-run pressure on the dollar, long-term interest rates should be slightly lower than forecast earlier (not fully reflecting the upward revision in inflation for 1989, which the markets and the Federal Reserve are assumed to

TABLE I-6. THE CBO FORECAST FOR 1988 AND 1989, IN COMPARISON WITH THE FORECAST MADE LAST WINTER

	Assumed[a]	Forecast	
	1987	1988	1989
Percent Changes, Fourth Quarter to Fourth Quarter			
Nominal GNP			
Winter	7.2	5.7	6.9
Summer	8.3	6.4	7.0
Real GNP			
Winter	3.8	1.8	2.6
Summer	5.0	2.6	2.7
Implicit GNP Deflator			
Winter	3.3	3.9	4.2
Summer	3.1	3.7	4.2
CPI-W[b]			
Winter	4.5	4.9	4.8
Summer	4.5	4.4	5.0
Calendar-Year Averages			
Unemployment Rate (Percent)			
Winter	6.2	6.2	6.1
Summer	6.2	5.5	5.5
Three-Month T-Bill Rate (Percent)			
Winter	5.8	6.2	6.7
Summer	5.8	6.3	7.1
Ten-Year Government Bond Rate (Percent)			
Winter	8.4	9.3	9.5
Summer	8.4	8.9	9.1
Wages and Salaries (Percent of GNP)			
Winter	49.3	49.4	49.6
Summer	49.7	50.1	50.0
Corporate Profits (Percent of GNP)			
Winter	6.8	6.4	6.4
Summer	6.9	6.5	6.4
Other Taxable Income (Percent of GNP)			
Winter	21.2	21.2	21.2
Summer	20.9	21.0	21.3

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics.

a. The national income data for 1987 were revised in July.

b. Consumer Price Index for urban wage earners and clerical workers.

recognize as temporary). Short-term interest rates, on the other hand, are assumed to be higher than were forecast by CBO last winter, since the economy is stronger than anticipated and the Federal Reserve is now expected to act more strongly to restrain the growth of domestic demand.

The Medium-Term Projections

CBO projects annual real GDP growth as averaging 2.4 percent between 1989 and 1994, and annual GNP growth at 2.3 percent, reflecting the reduced flow of net investment income from abroad. The civilian unemployment rate is projected to remain stable and close to current levels (see Tables I-7 and I-8). The GDP and GNP growth rates are slightly below potential growth, since CBO's use of historical averages assumes, in effect, that a mild recession will occur sometime during the five-year projection period. Because the growth of the labor force is expected to slow after 1989, these rates are somewhat slower than those for the 1988-1989 forecast period. Moreover, they are below the rates projected by CBO in February because the expansion of the economy since the publication of that report has moved it closer to capacity (see Figure I-16).[8]

The inflation rate as measured by the GNP deflator remains constant at an annual rate of 4.1 percent during the projection period, close to the average rate experienced since World War II. CPI inflation is slightly higher, at 4.4 percent per year. The difference between the growth rates of the GNP deflator and the CPI reflects three main factors in the projection:

- The dollar is projected to show a downward trend, and this decline increases the prices of imported goods, which are reflected in consumer prices but not in the GNP deflator.

- Computer prices continue to fall, both absolutely and relative to other prices. Since computer prices are reflected di-

8. See Howard N. Fullerton, Jr., "Labor Force Projections: 1986 to 2000," *Monthly Labor Review*, vol. 110, no. 9 (September 1987), pp. 19-29.

TABLE I-7. MEDIUM-TERM ECONOMIC PROJECTIONS FOR CALENDAR YEARS 1990 THROUGH 1994

	Actual	Forecast		Projected				
	1987	1988	1989	1990	1991	1992	1993	1994
Nominal GNP (Billions of dollars)	4,527	4,844	5,189	5,525	5,882	6,263	6,670	7,103
Nominal GNP (Percent change)	6.8	7.0	7.1	6.5	6.5	6.5	6.5	6.5
Real GNP (Percent change)	3.4	3.8	2.7	2.3	2.3	2.3	2.3	2.3
Implicit GNP Deflator (Percent change)	3.3	3.1	4.3	4.1	4.1	4.1	4.1	4.1
CPI-W (Percent change)	3.6	4.1	4.9	4.6	4.4	4.4	4.4	4.4
Unemployment Rate (Percent)	6.2	5.5	5.5	5.5	5.6	5.6	5.7	5.7
Three-Month Treasury Bill Rate (Percent)	5.8	6.3	7.1	6.8	6.6	6.3	6.1	5.9
Ten-Year Government Bond Rate (Percent)	8.4	8.9	9.1	8.7	8.3	8.0	7.6	7.4
Tax Bases (Percent of GNP)								
Corporate profits	6.9	6.5	6.4	6.3	6.2	6.2	6.1	6.1
Wage and salary disbursements	49.7	50.1	50.0	50.1	50.2	50.2	50.3	50.3
Other taxable income	20.9	21.0	21.3	21.2	21.1	21.0	20.8	20.7
Total	77.4	77.6	77.7	77.5	77.5	77.4	77.2	77.1

SOURCE: Congressional Budget Office.

rectly in the GNP deflator but not in the CPI, the deflator falls relative to the CPI.

- The relative importance of the computer sector in investment, imports, and exports continues its increase, extending the recent downward bias given by computers to the GNP deflator (see Appendix A).

The short-term interest rate declines throughout the projection period until it reaches 5.9 percent--a level consistent with the average of real short-term rates since the advent of the floating exchange-rate regime in 1973. Similarly, the long-term interest rate declines until it reflects the average spread between short- and long-term rates during this period.

TABLE I-8. MEDIUM-TERM ECONOMIC PROJECTIONS FOR FISCAL YEARS 1990 THROUGH 1994

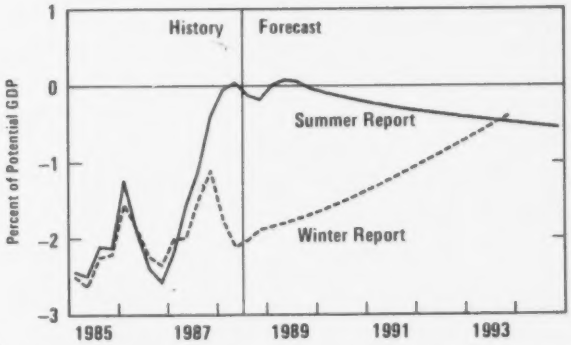
	Actual	Forecast		Projected				
	1987	1988	1989	1990	1991	1992	1993	1994
Nominal GNP (Billions of dollars)	4,437	4,769	5,102	5,440	5,790	6,165	6,565	6,992
Nominal GNP (Percent change)	5.9	7.5	7.0	6.6	6.4	6.5	6.5	6.5
Real GNP (Percent change)	2.6	4.4	2.6	2.4	2.3	2.3	2.3	2.3
Implicit GNP Deflator (Percent change)	3.2	3.0	4.2	4.1	4.1	4.1	4.1	4.1
CPI-W (Percent change)	2.7	4.1	4.8	4.7	4.4	4.4	4.4	4.4
Unemployment Rate (Percent)	6.4	5.6	5.5	5.5	5.6	5.6	5.7	5.7
Three-Month Treasury Bill Rate (Percent)	5.6	6.1	7.0	6.9	6.6	6.4	6.1	5.9
Ten-Year Government Bond Rate (Percent)	7.9	8.9	9.1	8.8	8.4	8.1	7.7	7.4
Tax Bases (Percent of GNP)								
Corporate profits	6.9	6.7	6.4	6.3	6.2	6.2	6.1	6.1
Wage and salary disbursements	49.6	50.0	50.0	50.0	50.1	50.2	50.2	50.3
Other taxable income	20.8	21.0	21.2	21.2	21.1	21.0	20.8	20.7
Total	77.3	77.7	77.6	77.6	77.5	77.4	77.2	77.1

SOURCE: Congressional Budget Office.

U.S. Foreign Debt and the Balance of Payments. Some of the long-run consequences of current economic imbalances become evident in the medium-term projections. Real net exports improve substantially, the result of the assumed downward trend in the real exchange rate. Nevertheless, the current account remains in deficit throughout the projection period. As a result, the net foreign indebtedness of the economy continues to grow, though at a declining rate. Under CBO's assumptions, net indebtedness exceeds $1 trillion dollars by 1994.[9]

9. This estimate is similar to those appearing in James K. Jackson, *Foreign Ownership of U.S. Assets: Past, Present and Prospects*, Congressional Research Service, Report for Congress 88-295E (April 15 1988); and "Financing the U.S. Current Account," *World Financial Markets* (New York: Morgan Guaranty Trust Company, November/December 1987), pp. 7-15. Other analysts differ on the details of the medium-term outlook for net debt, but massive growth is common to all projections.

Figure I-16.
Shortfall of Gross Domestic Product Below Potential



SOURCE: Congressional Budget Office.

NOTE: The gross domestic product gap is the difference between actual and potential real gross domestic product. The Congressional Budget Office's method of calculating potential GDP is detailed in Appendix B of *The Economic and Budget Outlook: An Update* (August 1987).

Annual debt service therefore rises by $49 billion between 1987 and 1994. Thus, the growth of the external debt slows the improvement in the current account and adds impetus to the downward trend in the dollar. At the same time, the increasing external debt reduces the share of domestic production that goes to residents of the United States. Both factors reduce the growth of real incomes.

Financial market pressures associated with the "twin deficits"--the external and federal deficits--may also make it harder to reduce real interest rates to the historical average by the end of the medium-term projection period. Most analysts believe that the large federal deficit coupled with low private saving increase interest rates, though the openness of the economy to international capital flows weakens this argument somewhat.[10] Thus, although the economic projections for the 1990-1994 period are not based on any particular fiscal policy, the declining interest-rate path that they show is prob-ably more consistent with a fiscal policy that makes substantial prog-ress toward reducing the federal deficit than with the fiscal policy implied in the baseline budget estimates.

10. Some theorists believe that private saving adjusts to changes in public saving without the need for interest-rate changes. See Robert J. Barro, "Are Government Bonds Net Wealth?" *Journal of Political Economy*, vol. 82 (November/December 1974), pp. 1095-1117. The evidence in support of this view is mixed, however.

Taxable Income

The outlook for wages and salaries, corporate profits, and other forms of taxable income (proprietors' income, and personal dividend and interest income) form an important part of CBO's economic forecast and projections. Tax revenues are projected on the basis of the forecast values of these income variables.

The forecast for taxable incomes in 1988 and 1989 is much higher than last winter's forecast (see Table I-6). This increase is partly the result of a major upward revision of the 1987 wages and salaries estimates in the national income accounts. (These revisions were not available to the Administration at the time of the midsession review, and thus are not reflected in the income assumptions underlying the Administration's most recent budget estimates.) Also, the stronger-than-expected economy in the first half of 1988 produced large increases in wages and salaries and corporate profits as percentages of GNP.

In the short term, the growth rates of wages and salaries and of corporate profits are expected to drop off slightly from their early 1988 pace, resulting in slight declines in their shares of GNP. The decline in the growth of wages and salaries largely reflects much slower employment growth. Growth in profits is restrained by higher interest rates and slower dollar depreciation. Other taxable income is expected to increase as a share of GNP, as higher interest rates generate greater personal interest income.

In the medium-term projections, rising real wages cause wages and salaries to increase as a percentage of GNP, while falling interest rates cause the share of other taxable income to fall, reflecting slower growth in interest income. Corporate profits also fall as a percentage of GNP, mainly because higher real wages more than offset the gain from lower interest rates.

The share of total taxable income in GNP falls throughout the medium-term projections (see Tables I-7 and I-8). This decline can be attributed to the pattern of the federal government's net interest payments and interest paid by consumers to business. These two variables form a part of taxable income, yet are excluded from national

TABLE I-9. COMPARISON OF ADMINISTRATION, CBO, AND *BLUE CHIP* SHORT-RUN ECONOMIC FORECASTS
(By calendar year)

	Assumed[a]	Forecast	
	1987	1988	1989
Fourth Quarter to Fourth Quarter (Percent change)			
Real GNP			
Administration	4.0	3.0	3.3
CBO	5.0	2.6	2.7
Blue Chip	5.0	3.0	1.9
Nominal GNP			
Administration	7.4	6.6	7.1
CBO	8.3	6.4	7.0
Blue Chip	8.3	6.6	6.3
Consumer Price Index			
Administration[b]	4.6	4.2	3.9
CBO[b]	4.5	4.4	5.0
Blue Chip[c]	4.5	4.4	5.0
Calendar-Year Averages (Percent)			
Three-Month Treasury Bill Rate			
Administration	5.8	6.0	5.5
CBO	5.8	6.3	7.1
Blue Chip	5.8	6.5	7.0
Ten-Year Government Note Rate			
Administration	8.4	8.5	8.1
CBO[d]	8.4	8.9	9.1
Blue Chip[e]	8.4	8.9	8.9
Civilian Unemployment Rate			
Administration[f]	6.1	5.5	5.2
CBO	6.2	5.5	5.5
Blue Chip	6.2	5.5	5.5

SOURCE: Congressional Budget Office; Office of Management and Budget; Eggert Economic Enterprises, Inc., *Blue Chip Economic Indicators* (August 10, 1988).

a. The national income data for 1987 were revised in July. The CBO and *Blue Chip* forecasts incorporate that revision, but the Administration forecast was prepared before the revision.

b. Consumer Price Index for urban wage earners and clerical workers.

c. Consumer Price Index for all urban consumers.

d. Ten-year constant-maturity bond rate.

e. *Blue Chip* does not project a 10-year note rate. The values shown here are based on the *Blue Chip* projection of the AAA bond rate, adjusted by CBO to reflect the estimated spread between AAA bonds and 10-year government notes.

f. The Administration's projection is for the total labor force, including armed forces residing in the United States, while the CBO and *Blue Chip* projections are for the civilian labor force excluding armed forces. In recent years, the unemployment rate for the former has tended to be 0.1 to 0.2 percentage point below the rate for the civilian labor force alone.

income, which counts only income derived from current production. Thus, with interest rates declining in the medium term--if other things remain the same--taxable income will be reduced as a share of national income. Furthermore, if progress on reducing the budget deficit proves to be better than assumed in the CBO baseline, total taxable income as a percentage of GNP will decline further, the result of lower debt-servicing requirements.

Uncertainty in the Forecast and Projections

The short-run economic forecast represents only one of many possible paths the economy might take. In CBO's judgment, it lies roughly in the middle of an array of possible paths.

Many forecasters accept the general line of argument presented here--that the Federal Reserve will restrain the growth of the economy--but they doubt that this slowing can be achieved smoothly. Some forecasters also believe that foreign investors are less sanguine about the dollar than assumed here, and that this will tend to force U.S. interest rates higher. For these reasons, several private econometric forecasters expect interest rates to be substantially higher than those in the CBO short-term forecast, and growth rates to be lower.

Other forecasts (for example, the Administration's midyear projections shown in Table I-9) predict less inflation and stronger growth. Such forecasts rest on a more optimistic assessment of the labor market, suggesting less monetary restraint without risk of higher wage inflation. Real growth could then be somewhat higher, and interest rates substantially lower.

Inflation and monetary policy do not exhaust the sources of uncertainty. Other major factors include the drought, which has yet to run its course, and unanticipated shocks to the economy. Finally, as noted previously and described in Appendix A, the changing shape of the economy, and particularly the increasing importance of the computer sector, add to the problems of forecasting. The general issue of uncertainty in economic forecasts is discussed in Appendix C of the Congressional Budget Office's *The Economic and Budget Outlook: Fiscal Years 1989-1993* (February 1988).

CHAPTER II

THE BUDGET OUTLOOK

Under current tax and spending policies, the federal budget deficit will shrink slowly over the next six years. The Congressional Budget Office projects that the deficit will fall from $155 billion in 1988 to $148 billion next year and $121 billion in 1994. The gap between federal government spending and revenues exceeds the targets set in the Balanced Budget Reaffirmation Act by widening amounts (see Figure II-1).

Because the nation's economy continues to grow over the next six years, the deficit shrinks steadily as a share of gross national product. By 1994, the deficit represents about 1.7 percent of GNP--about half its current portion and only one-third of the share that prevailed in the mid-1980s. Nevertheless, by historical standards, the deficit remains high: even as it slips below 2 percent in the early 1990s, the deficit-to-GNP ratio approximately matches its share during the economically troubled 1970s and far exceeds typical levels of the 1950s and 1960s.

The deficit's persistence in the face of the second-longest postwar economic expansion makes it clear that the fiscal imbalance is structural. Even with the economy running at or near full steam, federal government tax collections do not cover spending.

Persistent deficits imply continued demand by the U.S. government on credit markets: debt held by the public--now about $2 trillion--would grow to $2.8 trillion by 1994. With a relatively low private saving rate--as pointed out in Chapter I--the deficit further constricts overall domestic saving. Adding to the domestic capital stock and strengthening the nation's trade position will prove difficult as long as the low saving rate persists.

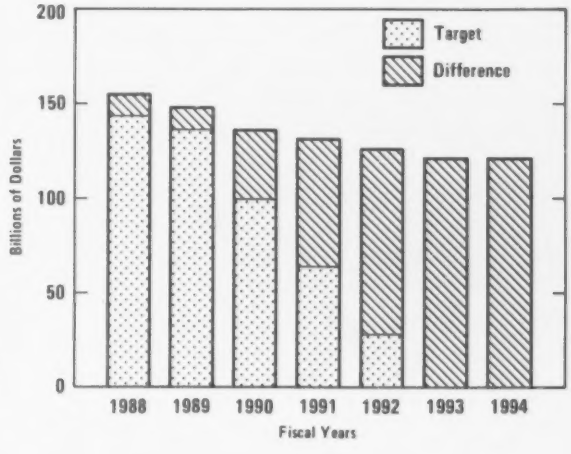
Policymakers and the public are focusing increased attention on Social Security's role in the budget and the economy. Social Security contributes greatly to the deficit's decline during the next six years, as

shown in Figure II-2. The Social Security surplus climbs from $39 billion in 1988 to $113 billion in 1994, while the deficit in the remainder of the budget actually grows.

The budget outlook has brightened since CBO last published its projections. Last winter, CBO projected that the deficit would worsen in both 1988 and 1989 before finally declining. The economy's strength accounts for nearly all of the improvement. The slowdown expected by CBO and many other forecasters in the wake of last fall's stock market crash did not occur: GNP grew healthily, and the unemployment rate declined. Interest rates rose, but CBO had anticipated this development.

None of the deficit's improvement stems from policy decisions. Of the two major pieces of legislation affecting the budget enacted since last winter, one--the expansion of the Medicare program to cover catastrophic health care costs--affects revenues and spending about equally. The second--the recently enacted drought relief bill--adds about $5 billion to the deficit in 1989, offsetting most of the drop that would otherwise occur in federal government agricultural spending. Most appropriations bills (which cover roughly 40 percent of federal

Figure II-1.
CBO Deficit Projections Compared With Targets



SOURCE: Congressional Budget Office.

NOTE: The Balanced Budget Reaffirmation Act sets deficit targets only through 1993, for which the target is zero.

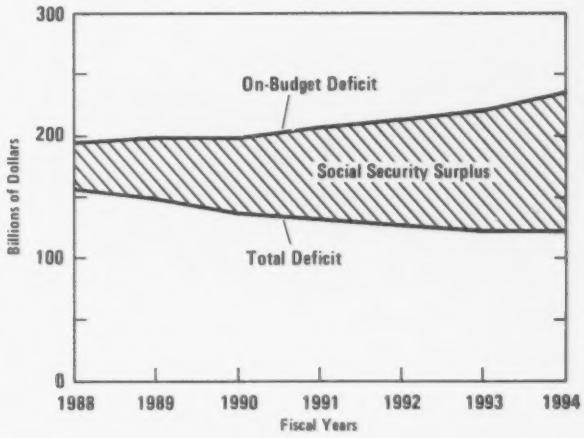
spending) have not yet been enacted for next year, although they are well along in the legislative pipeline. Modest savings could result from holding appropriations growth below inflation, the increase assumed by CBO in the absence of an enacted bill. But other initiatives currently under consideration--such as an expanded war on drugs--could increase 1989 spending.

Besides changes in the economic outlook and enacted legislation, a variety of other factors has affected the spending and revenue outlook. On balance, these other revisions worsen the deficit slightly in most years and are discussed in more detail later.

THE SHORT-RUN BUDGET OUTLOOK

The federal government deficit is projected to be $155 billion in fiscal year 1988, which ends on September 30. For 1989, the deficit under current policies is projected to be $148 billion, although this projection is more uncertain. Economic performance is always hard to forecast,

Figure II-2.
Social Security and the Budget



SOURCE: Congressional Budget Office.

and many other factors affect federal spending and revenues. Furthermore, the Congress and the President must still enact many bills that will influence the 1989 budget. Table II-1 summarizes the short-run projections of revenues, spending, and the deficit.

Both 1988 and 1989 will virtually match 1987's tally: last year, the deficit was $150 billion, well below initial projections. But a first-year revenue boost from tax reform, along with a number of one-time outlay savings (such as asset sales), contributed heavily to 1987's result. These factors are absent in 1988 and 1989. Thus, the relative stability of the deficit over this three-year period masks a slow but steady underlying improvement.

Fiscal Year 1988

With three-quarters of the fiscal year over, CBO now expects fiscal year 1988 revenues to total $908 billion and outlays to reach $1,063 billion, with a resulting deficit of $155 billion. The estimate has changed relatively little since last March, when CBO projected a deficit of $161 billion. The economy turned in a strong performance in the first half of the year, leading many economists who had foreseen a slowdown or recession to worry instead about high interest rates and a possible resurgence of inflation. The economy's strength boosted revenues and reduced spending for unemployment insurance. Interest

TABLE II-1. THE SHORT-RUN BUDGET OUTLOOK
(By fiscal year, in billions of dollars)

	Actual		Estimate	CBO Baseline	Base for Balanced Budget Act
	1986	1987	1988	1989	1989
Revenues	769	854	908	980	980
Outlays	990	1,005	1,063	1,127	1,133
Deficit	221	150	155	148	153

SOURCE: Congressional Budget Office.

rates rose slightly less than CBO had anticipated, helping to hold down interest outlays.

While the economy's performance--along with the drought, which holds down agriculture spending--helps 1988's bottom line, several other factors have worsened the deficit since CBO last published its projections in March. Spending is higher for national defense (almost $6 billion), deposit insurance ($3 billion), and defaults on mortgages insured by the Federal Housing Administration ($1 billion). Corporate income tax collections came in sharply below projections, failing to keep pace with economic profits. Finally, CBO had expected prepayments of some Foreign Military Sales program loans--permitted under last December's continuing resolution--to occur entirely in 1988. (Prepayments are recorded as negative outlays, thus reducing total spending.) It now appears that some payments will not occur until 1989, raising this year's outlays by $3 billion.

Fiscal Year 1989

For 1989, CBO has revised its deficit estimate substantially downward. Last March, CBO projected a 1989 deficit of $177 billion; current estimates point to $148 billion.

Economic factors dominate the revisions, raising 1989 revenues by $29 billion and lowering outlays by $6 billion. The reduction in outlays reflects lower unemployment insurance costs, slightly lower cost-of-living adjustments in benefit programs (most of which will be determined before the drought significantly affects consumer prices), and lower debt service costs. The additional revenues mostly come from higher personal income and payroll taxes.

Recently enacted legislation raises the 1989 deficit by $5 billion, mainly reflecting the drought relief bill. All other factors--commonly termed technical revisions--have little net impact for 1989. This is because the technical revisions include two special factors in 1989, both of which reduce outlays. First, in the absence of special legislation to aid farmers, the drought would have shrunk 1989 agriculture outlays by an estimated $7 billion (see Box II-1). Second, Foreign Military Sales prepayments are now pegged at $5 billion in 1989;

BOX II-1
THE DROUGHT OF 1988

Parched conditions in much of the nation have reduced agricultural production, driven up prices, and lowered projections of federal government spending for agriculture programs. In the absence of special relief legislation, the drought would cause government spending on agriculture to decline by $3.8 billion from previous projections in 1988 and by $6.9 billion in 1989. Much of 1989's drop, however, is restored by the newly enacted drought relief legislation. These estimates are based on crop conditions in early August. Next season's crops are assumed to face average weather conditions. The estimated effect of the drought on federal outlays may change as more becomes known about its severity and as requests for disaster aid are processed.

The drought greatly reduces outlays of the Commodity Credit Corporation (CCC), while causing smaller increases in outlays for crop insurance and Farmers Home Administration loan programs. The Disaster Assistance Act of 1988 (Public Law 100-387) boosts spending in all three areas, but primarily in CCC programs. Because it affects the economy, the drought also indirectly influences federal government revenues and nonagriculture spending (such as indexed benefit programs).

Farm Price Supports. The CCC operates the government's major price and income support programs for farmers. Without drought relief legislation, CCC spending would be $12.3 billion in 1988 ($4.7 billion below last February's estimate) and $8.9 billion in 1989 (down $8.5 billion from February). Most of the drop in outlays stems from the drought. Offsetting part of the reduction, the Disaster Assistance Act raises CCC spending by an estimated $4.5 billion next year, resulting in net CCC spending of $13.4 billion in 1989.

The drought and scorching heat cause lower production and higher prices for crops. The corn crop is projected to be about 36 percent below levels expected at the start of the season, and the soybean crop is projected to be down about 18 percent. Corn prices are assumed to be about $1 per bushel higher than they would be with normal weather, and soybeans about $2.20 per bushel higher. The drought wiped out over half of the nation's spring wheat crop, although the larger winter wheat harvest was unaffected.

As explained in a recent CBO report, *The Outlook for Farm Commodity Program Spending, Fiscal Years 1988-1993* (June 1988), a drought has several impacts on CCC spending. First, rising market prices reduce direct payments to farmers. These payments--termed deficiency payments--roughly make up the difference between actual market prices and higher target prices set by law for certain commodities. As market prices rise, the government's

Continued

deficiency payment per pound or bushel falls. Second, farmers pay back CCC loans and reclaim the crops that they pledged as collateral. Farmers gain by doing so whenever the market price rises above the CCC loan rate. Finally, the government may sell some of its commodity stockpiles in the market, mitigating the drought's pressure on prices. Receipts from such sales, of course, reduce total outlays. By selling its stocks, however, the government limits the upward movement in market prices and gives up some of the savings from lower deficiency payments. Commodity sales therefore actually boost total outlays.

Many farmers found their incomes drying up along with their crops; with government payments reduced, only those farmers with crops to sell could benefit from higher market prices. Widespread sympathy for farmers led the Congress to enact the new Disaster Assistance Act. Under the act, CCC will provide disaster payments to producers who have suffered major crop damage--including crops not ordinarily enrolled in CCC programs--and will aid certain livestock and dairy producers facing higher feed prices.

Projections of future CCC spending require assumptions about such factors as the weather, supply and demand for agricultural commodities, and the international economy. Updating CBO's June 1988 report, Appendix B presents some of the key assumptions underlying CBO's projections for 1988 through 1994.

Crop Insurance and Disaster Loans. Two other major programs operated by the U.S. Department of Agriculture face higher outlays because of the drought. Estimated Federal Crop Insurance Corporation (FCIC) outlays have increased by $0.4 billion in 1988 and $1.1 billion in 1989. Crop insurance protects farmers' incomes in the case of either local or widespread disaster. The program is heavily subsidized; nevertheless, only about one-fifth of eligible cropland is enrolled. The drought relief bill requires some farmers receiving disaster payments to enroll in FCIC next year.

Net outlays in the farmer loan programs of the Farmers Home Administration (FmHA) are also expected to rise. The financial hardship inflicted by the drought will reduce loan repayments, and will increase disbursements of disaster loans. Before the passage of the drought relief bill, only farmers covered by crop insurance, where it is available, could receive FmHA disaster loans, limiting the increase in such activity. The drought bill expanded eligibility. Compared with pre-drought estimates, net outlays for the farmer loan programs are higher by $0.4 billion in 1988 and $1.2 billion in 1989, with $500 million of the 1989 increase attributable to the drought relief bill.

earlier, they were assumed to occur entirely in 1988. These two factors suffice to offset other technical revisions that lower revenues (primarily corporate income taxes) and raise spending, mainly for defense and deposit insurance.

Progress on the 1989 Budget. In mid-August, with the start of the fiscal year still a month and a half away, the 1989 budget is not fully in place. Roughly 40 percent of the budget is funded through annual appropriations. Only one of the 13 regular appropriations bills, the Energy and Water Bill, has been enacted. However, the remaining 12 bills are well advanced in the legislative pipeline: one awaits the President's signature, two have emerged from conference committees, and the rest have separately passed the House and Senate and await conference action.

Besides the remaining appropriations bills, other legislation with budgetary effects may be enacted by October, when the Congress intends to adjourn. Among other areas, the Congress is actively considering welfare reform, expansion of the war on drugs, technical corrections to the 1986 Tax Reform Act, and other tax law changes.

The budget projections for 1989 reflect all legislation enacted to date. For programs funded in appropriations bills, but whose appropriation has not yet been enacted, CBO assumes an increase over the 1988 amount to keep pace with inflation (estimated to be 4.2 percent). Appropriations bills and other pending legislation will be crucial in determining compliance with the Balanced Budget Act in fiscal year 1989.

The Balanced Budget Reaffirmation Act of 1987. Last September, the Congress amended the Balanced Budget and Emergency Deficit Control Act of 1985, commonly referred to as Gramm-Rudman-Hollings. The new law sets a deficit target of $136 billion for fiscal year 1989; the target declines in steps until 1993, when the budget is to be in balance. The act requires automatic across-the-board cutbacks in spending if official estimates indicate that the targets appear unlikely to be reached, allowing for a $10 billion margin. Events between now and mid-October will determine the law's effect on the budget for fiscal year 1989.

The original Balanced Budget Act failed to pass constitutional tests because of the role it gave to the head of the General Accounting Office, a legislative branch agency, in determining cutbacks. The amended act puts the entire responsibility for estimating and carrying out the cutbacks squarely on the Office of Management and Budget. CBO, however, plays an advisory role. OMB's deficit projections for fiscal year 1989 are lower than CBO's, lessening the likelihood of sequestration.

On August 25, OMB must issue an official projection of the deficit under policies in place in mid-August. Previewing this estimate, OMB's midsession review in late July put the 1989 deficit (as measured under the Balanced Budget Reaffirmation Act) at $140 billion--about $6 billion below the effective target of $146 billion (the official $136 billion requirement plus the $10 billion margin). The drought bill has since added roughly $4 billion to this figure, according to OMB estimates. (OMB's midsession review was predicated on a less severe drought than assumed by CBO; thus, OMB assigns a lower cost to drought relief.) OMB must make a second, binding estimate of the deficit in mid-October. If policy changes enacted before mid-October do not push the deficit over $146 billion, in OMB's estimate, sequestration will not occur. Nevertheless, if sequestration is triggered, the $10 billion margin is irrelevant, and the cuts must be calibrated to reach a deficit of $136 billion. Policy changes include all legislation enacted during the two-month period--such as final appropriations bills and other laws--as well as regulatory actions.

According to CBO's estimates, the 1989 deficit would not meet the target without further savings. CBO's own estimates of the 1989 deficit and necessary program-by-program cutbacks--contained in a separate report required by the act--will be sent to the Congress and to the Director of OMB on August 20. CBO estimates the 1989 deficit for purposes of the act to be nearly $153 billion. As shown in Table II-2, this figure removes approximately $5 billion in receipts from loan prepayments from the baseline deficit, receipts that may not be counted under the Balanced Budget Act. Under CBO estimates, reaching the act's $136 billion target wholly through sequestration would require across-the-board cuts of about 7 percent in defense and about 6 percent in nondefense, nonexempt programs.

TABLE II-2. DIFFERENCES BETWEEN CBO BASELINE AND ESTIMATED DEFICIT FOR PURPOSES OF THE BALANCED BUDGET ACT, FISCAL YEAR 1989
(In billions of dollars)

CBO Baseline Deficit	147.6
Remove:	
Foreign Military Sales prepayments	4.7
Rural Electrification Administration prepayments	0.5
Subtotal	5.2
CBO Estimate of Deficit for Balanced Budget Act	152.8

SOURCE: Congressional Budget Office.

THE BUDGET OUTLOOK THROUGH 1994

Under current policies, the federal government's deficit will decline slowly over the next six years. The decline is not swift enough to meet the targets set in the Balanced Budget Act, which calls for a balanced budget by 1993. Table II-3 summarizes the baseline projections through 1994.

The Baseline Concept

CBO prepares baseline budget projections to show the consequences of leaving current budgetary policies unchanged. The projections are consistent with the two-year economic forecast and the longer-run economic assumptions outlined in Chapter I, and follow the assumptions about federal spending and taxes specified in the Balanced Budget Act. Estimates of revenues and entitlement spending (such as Social Security and Medicare) are based on current laws. The growth in revenues and entitlement programs thus depends on provisions set in law (for example, tax rates and benefit formulas), on the economy, and on a variety of other factors.

In a few select cases, the projections depart from current law by assuming the extension of expiring provisions. Three entitlement programs--Food Stamps, Guaranteed Student Loans, and Trade Adjustment Assistance--are assumed to continue after their scheduled ex-

pirations. (Excluding these programs--especially the first two--would ignore billions of dollars in spending that is likely to be reauthorized.) On the revenue side, excise taxes dedicated to five trust funds (the Airport and Airway Trust Fund, the Highway Trust Fund, the Leaking Underground Storage Tank Trust Fund, the Hazardous Substance Superfund, and the Vaccine Injury Compensation Trust Fund) are extended after their scheduled expirations in the 1990s. (Required by the Balanced Budget Reaffirmation Act, this assumption also mirrors the traditional treatment in baseline projections of major trust funds.) All other spending programs and tax provisions that expire under current law are assumed to expire.

TABLE II-3. CBO BASELINE PROJECTIONS OF REVENUES, OUTLAYS, AND DEFICITS
(By fiscal year)

	1988	1989	1990	1991	1992	1993	1994
				In Billions of Dollars			
Revenues	908	980	1,064	1,134	1,202	1,276	1,354
Outlays	1,063	1,127	1,200	1,265	1,329	1,397	1,475
Deficit	155	148	136	131	126	121	121
Debt Held by the Public	2,031	2,178	2,313	2,441	2,566	2,686	2,806
				As a Percentage of GNP			
Revenues	19.0	19.2	19.6	19.6	19.5	19.4	19.4
Outlays	22.3	22.1	22.1	21.8	21.5	21.3	21.1
Deficit	3.2	2.9	2.5	2.3	2.0	1.8	1.7
Debt Held by the Public	42.6	42.7	42.5	42.2	41.6	40.9	40.1
				In Billions of Dollars			
Reference:							
Balanced Budget Act Deficit Targets (Billions of dollars)	144	136	100	64	28	0	a

SOURCE: Congressional Budget Office.

a. The Balanced Budget Act sets deficit targets only through fiscal year 1993.

As for entitlements, the projections of offsetting receipts (for example, receipts from Medicare premiums and from oil leases) are estimated according to current law and policy. Estimates of net interest costs are consistent with the assumed interest rates and deficits.

Unlike the categories just mentioned, many activities of the federal government are funded by annual appropriations acts. The projections assume that funding increases each year in line with inflation--that is, by 4.2 percent in fiscal year 1989 and by similar percentages in 1990 through 1994. (An exception is programs covered by the only fiscal year 1989 appropriations bill enacted to date; programs funded in the Energy and Water Bill reflect the enacted 1989 amount, and are increased for inflation beginning in 1990.)

The authors of the Balanced Budget Act sought a uniform approach for projecting all appropriated activities. For that reason, the baseline does not contain year-to-year fluctuations in funding levels to accommodate special program needs (for example, the 1990 Census).

Except for the year already in progress, the baseline is not a forecast of budget outcomes. The baseline's major purpose is to serve as a benchmark when considering alternative budget policies. Almost all participants in budget debates use baseline projections as a starting point for gauging policy changes. The Congress typically describes initiatives in terms of changes from a baseline; the Administration portrays its budget proposals in similar terms. Other groups--such as the new National Economic Commission, scheduled to make its recommendations around the turn of the year--also use such projections to launch their examination of budget priorities.

The Six-Year Budget Outlook

Over the next six years, revenues under current tax law, given CBO's economic assumptions, average about 19.4 percent of GNP. Baseline outlays decline steadily as a share of GNP, from 22.3 percent in 1988 to 21.1 percent in 1994. As a result, the deficit falls relative to GNP even while remaining above $120 billion in dollar terms. Detailed projections of revenues by source and outlays by category are provided in Table II-4.

TABLE II-4. CBO BASELINE BUDGET PROJECTIONS (By fiscal year)

	1988	1989	1990	1991	1992	1993	1994
				In Billions of Dollars			
Revenues							
Individual income	405	433	477	514	551	590	629
Corporate income	91	107	119	126	131	136	143
Social insurance	335	360	386	412	436	464	493
Excise	35	34	34	31	30	31	31
Estate and gift	8	8	8	8	8	9	9
Customs duties	15	16	17	19	20	22	23
Miscellaneous	20	22	23	24	25	25	26
Total	908	980	1,064	1,134	1,202	1,276	1,354
Outlays							
National defense	293	300	310	322	335	348	363
Nondefense discretionary spending	178	190	204	208	217	223	234
Entitlements and other mandatory spending	498	535	573	614	656	702	754
Net interest	151	163	178	188	192	198	202
Offsetting receipts	-57	-61	-64	-67	-71	-75	-78
Total	1,063	1,127	1,200	1,265	1,329	1,397	1,475
Deficit	155	148	136	131	126	121	121
				As a Percentage of GNP			
Revenues							
Individual income	8.5	8.5	8.8	8.9	8.9	9.0	9.0
Corporate income	1.9	2.1	2.2	2.2	2.1	2.1	2.0
Social insurance	7.0	7.1	7.1	7.1	7.1	7.1	7.1
Excise	0.7	0.7	0.6	0.5	0.5	0.5	0.4
Estate and gift	0.2	0.2	0.1	0.1	0.1	0.1	0.1
Customs duties	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Miscellaneous	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Total	19.0	19.2	19.6	19.6	19.5	19.4	19.4
Outlays							
National defense	6.1	5.9	5.7	5.6	5.4	5.3	5.2
Nondefense discretionary spending	3.7	3.7	3.7	3.6	3.5	3.4	3.3
Entitlements and other mandatory spending	10.4	10.5	10.5	10.6	10.6	10.7	10.8
Net interest	3.2	3.2	3.3	3.2	3.1	3.0	2.9
Offsetting receipts	-1.2	-1.2	-1.2	-1.2	-1.2	-1.1	-1.1
Total	22.3	22.1	22.1	21.8	21.5	21.3	21.1
Deficit	3.2	2.9	2.5	2.3	2.0	1.8	1.7

SOURCE: Congressional Budget Office.

NOTE: Totals include Social Security, which is off-budget.

The Revenue Outlook. Expected to total 19 percent of GNP in 1988, revenues grow to 19.2 percent of GNP in 1989 and climb again, to 19.6 percent, in 1990. Strong growth in taxable income causes revenues to outpace GNP in 1989; in 1990, the increase reflects phased-in provisions of revenue legislation. After 1991, revenues shrink slightly relative to GNP, as growth in corporate income taxes, unemployment insurance taxes, excise taxes, and estate and gift taxes tapers off. By 1993, revenues are projected to total 19.4 percent of GNP (see Table II-4).

As just noted, the growth in revenues between 1989 and 1990 (from 19.2 percent to 19.6 percent of GNP) results from recent and not-so-recent legislation. Reductions in individual income taxes under the 1986 Tax Reform Act are largest in 1989, but diminish thereafter as the base-broadening provisions of the act are phased in. Additional revenues from the act's corporate income tax provisions also become more important in 1990. The income tax surcharge under the new catastrophic health insurance program generates less than $0.5 billion in 1989, but is fully in place in the next year, raising over $4 billion in 1990. A Social Security tax rate increase--contained in a 1983 law--also takes effect on January 1, 1990, increasing 1990 reve-nues by about $5 billion.

Tax law changes are less important after 1990, mainly contributing to a small reduction in the corporate tax share. Unemployment insurance taxes actually decline in dollar terms, as healthy balances in the unemployment trust funds enable many states to reduce their tax rates; excise and estate and gift tax collections fail to keep pace with GNP growth. Because of these relatively slow-growing sources, revenues' share of GNP declines slightly after the turn of the decade. Between 1988 and 1994, personal income taxes and Old-Age and Survivors, Disability, and Hospital Insurance (OASDHI) taxes provide increasing shares of the government's total revenues--over four-fifths in 1994. Corporate income taxes continue to provide somewhat more than a tenth, and other tax sources, taken as a whole, decline slightly in relative importance.

The Outlook for Federal Spending. The bulk of federal spending represents benefit payments to individuals, interest on the debt, and similar programs that are governed by permanent law. Less than half of all spending is actually decided through the annual appropriations

debate. In the baseline, the share devoted to these latter activities--termed defense and nondefense discretionary spending--shrinks further, as Table II-4 shows.

In the baseline, appropriations are assumed to rise only in step with inflation; thus, unlike the economy and other parts of the budget, they have no real growth. Under this assumption, defense spending would fall from 6.1 percent of GNP at present to 5.2 percent by 1994--about the level that predated the defense buildup of the early 1980s. Nondefense discretionary spending encompasses a broad variety of government activities: from transportation, veterans' medical care, and the expenses of the Internal Revenue Service to space and science, to name only a few. About a fifth of nondefense discretionary spending goes toward pay and benefits for federal workers, and about a third is sent out as grants to state and local governments. In the baseline, nondefense discretionary spending declines from 3.7 percent of GNP at present to 3.3 percent by 1994.

By adjusting all programs equally for inflation, the baseline preserves the current priorities in both defense and nondefense discretionary programs. Proposals to change the mix of existing programs (for example, to deemphasize defense procurement in favor of funding for operation and maintenance), to cut back or eliminate activities, or to spend more on needs widely perceived as urgent (such as air traffic control or aid to the homeless) can all be gauged in terms of changes from the baseline.

Entitlements and other mandatory spending are the largest category of federal outlays, representing about half of total outlays and more than a tenth of GNP. This category includes almost all of the major benefit programs such as Social Security, Medicare and Medicaid, and federal civilian and military retirement. It also includes certain other programs like farm price supports and deposit insurance. The common thread linking these programs is their nearly automatic nature: instead of deciding on funding levels each year, the Congress sets eligibility rules and payment formulas. As Table II-4 shows, under current law, entitlements and mandatory spending grow gradually from 10.4 percent of GNP in 1988 to almost 11 percent in 1994. Some of the fastest-growing entitlements are examined further below.

Net interest payments grew rapidly during the late 1970s and early 1980s, the consequence first of high interest rates and then of large deficits. Net interest now represents about a seventh of federal spending and 3.2 percent of GNP. Interest costs decline very slightly as a share of GNP in the baseline projections, even as the government continues to borrow $120 billion a year or more to finance its deficits. The slight decline stems from the leveling-off of federal debt as a share of GNP (as shown in Table II-3), and from continued savings from the refinancing of debt borrowed at the higher interest rates of the early and mid-1980s. Nevertheless, interest remains one of the most volatile categories of federal spending. Relatively small errors in the interest rate forecast imply large errors in projected net interest spending, as illustrated later in this chapter.

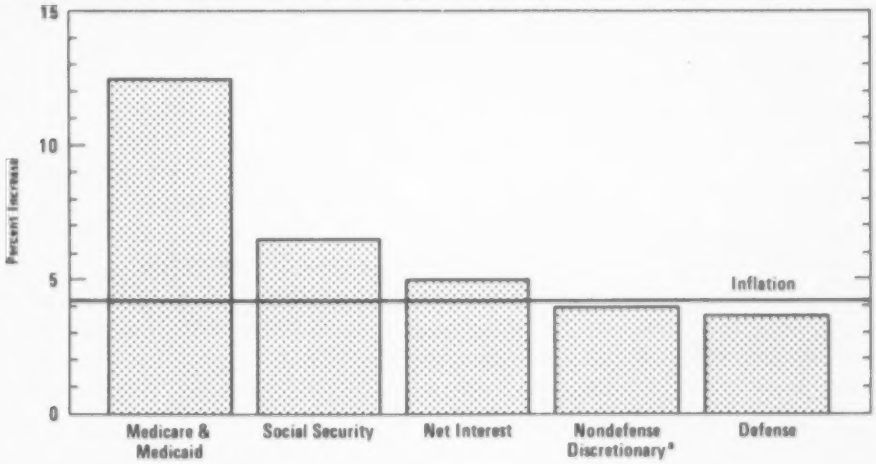
Some federal government receipts are recorded as negative outlays, rather than as revenues. This category--termed offsetting receipts--stays at about 1.2 percent of GNP throughout the projections. More than half of offsetting receipts consist of government agencies' contributions for their employees' retirement; while the agencies' costs are included in their budgets, the money does not immediately leave the government, and a negative amount is logged to balance the books. Other offsetting receipts stem from business transactions such as payments for optional Medicare coverage, oil and mineral leases, timber sales, and sales of hydroelectric power. All of these receipts stem from voluntary transactions, and are not generated by the government's taxing power.

The federal budget clearly contains both fast- and slow-growing programs; as a result, the baseline reflects gradual shifts in the shares of government spending attributable to particular activities. As Figure II-3 shows, the two large health-care entitlements--Medicare and Medicaid--are the fastest-growing major category of federal spending, with growth projected to average more than 12 percent a year. Medicare, a non-means-tested program, covers a portion of medical expenses for most of the nation's elderly and some of its disabled. Medicare benefits include Hospital Insurance, Supplementary Medical Insurance (primarily covering physicians' charges), and--starting in 1990--the new Drug Insurance program. Major factors underlying Medicare's growth include growth in the eligible population, high medical care inflation, greater use of medical services by the average beneficiary, and the new expansion of catastrophic health care. Medi-

caid, a joint federal/state program, pays some medical costs for the needy. Major factors fueling Medicaid's growth include medical care inflation; increases in the population receiving long-term care; and expanded eligibility for some pregnant women, children, and the elderly. Currently about half as big as Social Security, Medicare and Medicaid combined grow to almost three-quarters of the size of Social Security by 1994, under current policies.

Total outlays for Social Security benefits climb about 6.5 percent a year through 1994, driven by cost-of-living adjustments, additional beneficiaries, and greater average benefits for new retirees with recent earnings. While Social Security continues to hold second place among the categories of spending shown in the figure--defense spending is larger in all years--this sustained growth makes it an ever more important component of the budget. (Although they are not shown in

Figure II-3.
Selected Fast- and Slow-Growing Programs,
Fiscal Years 1988-1994 (Average annual growth in spending)



SOURCE: Congressional Budget Office.

*Excludes one-time savings.

the figure, other retirement and disability programs--mainly federal civilian and military retirement--are about one-fourth as large as Social Security, and grow almost as fast.) Next comes interest spending; fueled by continued government borrowing, interest payments climb rapidly at first and more slowly after 1991, averaging growth of about 5 percent a year during the six-year period. Both defense and nondefense discretionary spending, at annual growth averaging 3 percent to 4 percent, fall in the slow-growing category; because of lags between appropriations and actual spending, they grow in the baseline by slightly less than inflation.

Trust Funds in the Projections. The federal government operates many trust funds, ranging from the small (the Abraham Lincoln Birthplace Preservation Trust Fund) to the enormous (Social Security and Civil Service Retirement). In these funds, income is earmarked for particular types of spending. The reasons for establishing trust funds, and features that distinguish trust funds from other government funds, are summarized in Box II-2. Trust fund surpluses climb steadily for the next six years under current policies, while the deficit in the remainder of the budget (termed "federal funds") actually grows. As Table II-5 shows, led by Social Security, by 1994 the annual trust fund surplus reaches $174 billion (up from $100 billion in 1988), while the deficit in the rest of the budget attains $295 billion (up from $255 billion in 1988).

Trust funds vary widely in their size, sources of income, and expenditures. The biggest trust funds finance social insurance programs, and by far the largest--in terms of annual flows--is Social Security. Other large social insurance trust funds shown in Table II-5 include Medicare, Civil Service Retirement and Military Retirement, and Unemployment Insurance. The two major transportation trust funds--the Airport and Airway Trust Fund and the Highway Trust Fund--are smaller than the social insurance funds, although their cumulative surpluses are very large relative to annual spending.

Earmarked taxes are a major source of trust fund revenue. Many federal government collections--such as social insurance taxes and contributions, excise taxes on airplane tickets, and gasoline taxes--are designated for particular purposes. When collections exceed spending for these programs, the extra funds are lent to the U.S. Treasury. In this way, trust fund surpluses help to hold down the government's bor-

rowing demands. In return, the Treasury issues securities to the trust funds. As Table II-5 shows, total trust fund holdings grow to almost $1.4 trillion by 1994.

The Social Security surplus climbs from $39 billion in 1988 to $113 billion in 1994, and holdings of federal securities reach almost $600 billion. These surpluses result from reforms enacted in 1977 and 1983, which raised payroll taxes in several steps and reduced benefits modestly. Proponents argued that large Social Security surpluses over the next few decades would help prepare for the baby boom's retirement, when--beginning around 2015--Social Security benefits should significantly exceed the system's taxes. The Social Security surpluses are termed off-budget to distinguish them from other gov-

BOX II-2
WHAT ARE TRUST FUNDS?

The federal government uses trust funds as a bookkeeping tool to keep track of income and spending for particular purposes. Most federal government trust funds were established for one of three reasons:

- To assure individuals making contributions that they are earning a right to future benefits (examples are Social Security and Hospital Insurance);
- To indicate that certain tax revenues will be spent for specific purposes (Highway, and Airport and Airway);
- To recognize certain costs when they accrue, not when cash benefits are paid (Military Retirement and Civil Service Retirement).

Trust funds are not the same as public enterprise funds, which also keep track of spending and collections associated with particular activities. Public enterprise funds--such as the Postal Service or the Tennessee Valley Authority--generally conduct business activities, selling services to the public and using the proceeds (and, often, a general fund subsidy) to cover their costs. Outlays for public enterprise funds are recorded on a net basis.

The two Social Security trust funds--Old Age and Survivors Insurance and Disability Insurance--are off-budget, meaning that their totals are reported separately from the rest of the budget. Nevertheless, a dollar of federal spending generally has the same macroeconomic impact regardless of whether it is termed on- or off-budget, and regardless of whether it is financed by a trust fund or from the general fund.

ernment programs, but are included in measures of the deficit used by most economists and financial market participants, as well as by the Congress in assessing compliance with the Balanced Budget Act targets. As the surpluses envisioned in the 1983 reforms have actually materialized, policymakers have joined a spirited debate over their implications for fiscal policies and targets. Box II-3 summarizes some of the issues in this debate.

Steady growth in trust fund surpluses may seem puzzling in light of the aggregate spending and outlay projections discussed earlier. After all, social insurance taxes and contributions--a major source of funding for trust funds--remain at about 7 percent of GNP. Social Security, Medicare, and federal civilian and military retirement--all of which are financed by trust funds--were identified as particularly fast-growing spending categories.

TABLE II-5. TRUST FUND SURPLUSES IN THE CBO BASELINE
(By fiscal year, in billions of dollars)

	1988	1989	1990	1991	1992	1993	1994	Holdings, End of 1994
Social Security	39	52	63	74	86	99	113	591
Medicare	16	20	19	17	17	15	14	175
Military Retirement	14	16	16	17	18	18	19	149
Civilian Retirement	20	21	21	24	25	26	29	347
Unemployment	8	7	5	4	2	1	a	55
Highway and Airport	2	3	2	1	a	a	a	31
Other	a	-2	1	1	1	1	-1	48
Total Trust Fund Surplus	100	116	127	137	149	160	174	1,395
Federal Funds Deficit	255	264	263	269	275	281	295	n.a.
Total Deficit	155	148	136	131	126	121	121	n.a.

SOURCE: Congressional Budget Office.

NOTE: n.a. = not applicable.

a. Less than $500 million.

This paradox is resolved by recognizing the importance of transfers within the budget as a source of the trust fund surplus. Trust funds have many sources of income besides earmarked tax collections. Medicare's Supplementary Medical Insurance program, for example, currently gets about a fourth of its funds from voluntary enrollee premiums and most of the rest from general revenues. Both Civil Service Retirement and Military Retirement receive large lump-sum appropriations each year. One of the most important sources of trust fund income is interest on Treasury securities. As long as trust funds run surpluses, their holdings of Treasury securities and their interest income climb. Interest paid to trust funds grows from about $44 billion in 1988 to more than $100 billion in 1994. These interest payments are outlays of the general fund and account for much of the growth in the federal funds deficit.

Changes in the Projections Since March. CBO last published its baseline projections in March, using an economic forecast developed around the turn of the year. At that time, CBO projected that the deficit would worsen in 1988 and 1989 before gradually declining. The updated projections are more optimistic, especially after 1988.

Table II-6 shows why the budget projections have changed since March. Many of these reasons were discussed earlier in the special section on the short-term budget outlook. Little of the improvement in the deficit stems from policy changes. Of the two major pieces of budgetary legislation enacted to date, one--the catastrophic health care bill--has little effect on the deficit. Box II-4 contains a discussion of the benefits and financing provisions of this important legislation. The second, the drought relief bill, adds about $5 billion in spending for fiscal year 1989.

As noted earlier, changes resulting from the revised economic outlook reduce the deficit substantially in all years of the projection. Revisions in revenues dominate this category. Roughly 80 percent of the additional revenues in 1989 and 1990, and even more in later years, result from substantial upward revisions in personal income. (By 1993, they account for the entire upward revision.) The changes in personal income--primarily wages and salaries--raise both individual income taxes and Social Security taxes. Other changes in projected revenues attributable to revised economic assumptions are much

BOX II-3
SOCIAL SECURITY AND THE BUDGET

Roughly a fourth of the federal government's revenues, and a fifth of its spending, stem from the Social Security program. The budget projections in this chapter include Social Security revenues and outlays. Excluding Social Security--or any other government program--from the totals would distort the government's impact on the economy and misrepresent its borrowing needs. Recognizing this, the Balanced Budget Act set targets for the overall deficit, including Social Security. But the act also highlights Social Security's contributions to the totals by requiring that they be presented as off-budget. These projections are shown below.

ON- AND OFF-BUDGET TOTALS
(By fiscal year, in billions of dollars)

	1988	1989	1990	1991	1992	1993	1994
Off-Budget (Social Security)							
Revenues	242	264	287	309	330	353	376
Outlays	203	212	224	235	245	254	263
Surplus	39	52	63	74	86	99	113
On-Budget (All Other Programs)							
Revenues	666	716	778	824	872	923	978
Outlays	860	915	977	1,030	1,084	1,143	1,212
Deficit	194	199	199	206	212	220	234

SOURCE: Congressional Budget Office.

Off-budget outlays are not the same as Social Security benefit payments: benefits from the two trust funds--Old Age and Survivors Insurance and Disability Insurance--are much greater than the totals shown. Of course, off-budget outlays include these benefits and other trust fund outlays such as administrative costs. But as offsets, off-budget outlays also reflect some income received by Social Security from other federal agencies and programs. An especially fast-growing source is interest income: Social Security interest grows sixfold between 1988 and 1994, as shown in the following table, reflecting large increases in the funds' holdings of Treasury securities during the six-year period.

Continued

SOCIAL SECURITY INTEREST AND FUND HOLDINGS
(By fiscal year, in billions of dollars)

	1988	1989	1990	1991	1992	1993	1994
Interest Received by Social Security	7	11	16	21	28	34	42
Change in Holdings	39	52	63	74	86	99	113
Holdings, End of Year	105	157	219	294	379	478	591

SOURCE: Congressional Budget Office.

The growth in interest payments and, to a lesser extent, the increase in other intrabudgetary transactions helps to explain why the on-budget deficit climbs over the 1988-1994 period even while the overall budget picture improves. Much of the Social Security surplus does not reflect transactions with the public but transfers within the budget. The payment of interest to Social Security is a source of pressure on the on-budget deficit, just as if the funds had been borrowed from private bondholders.

Recognizing the long-run implications of Social Security as well as other programs, CBO has begun analyzing broad budgetary trends beyond its usual five-year horizon. But longer-run budget projections carry their own set of hazards. Some of the usual baseline assumptions may be too stringent for long-term projections. For example, increasing appropriations only for inflation allows defense and nondefense discretionary spending to continue to shrink as a share of GNP. The economic uncertainty of longer-run projections is also huge. Clearly, Social Security helps the budget picture through the mid-1990s and for some time beyond. Nevertheless, speculation by some observers that Social Security will buy up the federal debt is premature. Attaining budget balance merely keeps the debt from growing; buying back the existing debt would require years of surplus in the total budget.

Setting budgetary targets requires decisions about the government's contribution to total national saving. Balancing the overall budget would greatly increase national saving from current levels by removing the federal government's appetite for the savings of other sectors. Some advocate moving even beyond this goal by aiming for zero deficits in non-Social Security programs, implying large total surpluses. Sharply increasing national saving in this manner, however, would exact a toll on current consumption.

TABLE II-6. CHANGES IN CBO BASELINE ESTIMATES SINCE MARCH (By fiscal year, in billions of dollars)

	1988	1989	1990	1991	1992	1993
Revenues						
March 1988 Estimate	898	954	1,036	1,111	1,181	1,261
Enacted Legislation	0	a	4	5	6	7
Economic Reestimates	19	29	27	20	17	9
Technical Reestimates	-9	-3	-4	-3	-2	-1
Total	10	26	28	22	22	14
Current Estimate	908	980	1,064	1,134	1,202	1,276
Outlays						
March 1988 Estimate	1,059	1,131	1,206	1,271	1,335	1,400
Enacted Legislation	a	5	3	5	5	7
Economic Reestimates						
Net interest	-1	-4	-8	-12	-13	-13
All other	-1	-2	-2	-1	-1	-1
Subtotal	-3	-6	-10	-14	-15	-14
Technical Reestimates						
Defense	6	4	3	2	2	2
Deposit insurance	3	4	2	1	1	1
Agriculture	-4	-7	-4	-2	-1	-2
Foreign Military Sales prepayments	3	-5	a	a	a	a
All other	-1	1	1	2	2	3
Subtotal	6	-3	1	3	3	4
Total	4	-4	-6	-6	-6	-3
Current Estimate	1,063	1,127	1,200	1,265	1,329	1,397
Deficit						
March 1988 Estimate	161	177	170	159	154	139
Enacted Legislation	a	5	-1	a	a	a
Economic Reestimates	-22	-35	-37	-34	-32	-23
Technical Reestimates	15	a	5	6	5	5
Total	-6	-29	-34	-28	-28	-18
Current Estimate	155	148	136	131	126	121

SOURCE: Congressional Budget Office.

NOTE: The March 1988 baseline contained projections only through fiscal year 1993.

a. Less than $500 million.

smaller. These include, most notably, additional corporate income taxes resulting from higher taxable profits; higher deposits of earnings by the Federal Reserve as a result of higher short-term interest rates; reduced customs duties from lower merchandise imports; lower payroll taxes from the self-employed; and, finally, lower unemployment insurance system revenues resulting from continued low unemployment, which enables states to reduce unemployment insurance taxes. These factors add slightly to revenues in 1989 and 1990, but tend to offset each other in later years.

The data that became available in late July in the three-year revisions of the National Income and Product Accounts contained substantial upward revisions in wages and salaries for 1987 and especially for the first half of 1988. The revised figures showed that total U.S. output was significantly higher than previously thought, and also that wages and salaries claimed an even bigger piece of the economic pie. These new data confirmed what withheld income and payroll taxes had suggested since the start of the fiscal year: employment and income have been persistently higher than earlier statistics had indicated. The increase in 1988's wage and salary share, when projected to subsequent years, generates roughly $7 billion a year in additional taxes in 1989 through 1991 and greater amounts thereafter.

The drought, which has been reflected in the CBO forecast, is expected to have little overall impact on tax receipts. While the dollar effect on revenues cannot be calculated--too many uncertainties exist--the most likely effect is a very minor reduction in revenues in 1988, because farm income is reduced, and an equally minor increase in 1989. Many of the taxes on livestock sales caused by this summer's drought will be deferred. With a return of normal weather next year, and with more land brought into production, farm income is expected to rise. Over the longer run, incomes and tax revenues are likely to be unaffected by the drought.

The new economic assumptions also affect projections of federal spending. Cost-of-living adjustments are slightly lower, even despite drought-induced increases in consumer prices. Unemployment insurance outlays are lower, mainly in 1988 through 1990. Interest costs are down, primarily in response to lower borrowing requirements. CBO had correctly anticipated a rise in interest rates, so that only small revisions in the interest rate forecast proved necessary.

BOX II-4
THE CATASTROPHIC HEALTH CARE BILL

The Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360) was signed into law on July 1, 1988. The new law marks the largest expansion of Medicare benefits since the program began more than 20 years ago. In a major departure from previous practice, the new benefits established by the bill are entirely financed by premiums and additional income taxes paid by participants. Both benefits and contributions are phased in during the 1989-1993 period, as shown in the table.

BUDGETARY EFFECTS OF THE CATASTROPHIC CARE BILL
(By fiscal year, in billions of dollars)

	1989	1990	1991	1992	1993
Costs					
Hospital Insurance	1.2	1.9	2.1	2.3	2.5
Supplementary Medical Insurance	0.1	2.2	3.6	4.3	4.9
Drug Insurance	a	0.1	0.9	1.9	2.7
Medicaid and Other	a	0.4	0.5	0.5	0.5
Total	1.4	4.6	7.2	8.9	10.6
Financing					
Premiums	1.1	1.8	2.7	3.6	4.1
Income Taxes	0.3	4.2	4.9	5.7	6.5
Total	1.4	6.1	7.6	9.2	10.6
Net Budget Effect					
Effect on Deficit	-0.1	-1.4	-0.5	-0.3	a

SOURCE: Congressional Budget Office.

NOTE: Costs and net budget effect include administrative expenses that are subject to future appropriation.

a. Less than $50 million.

Continued

Most of the *Hospital Insurance (HI)* benefits (Part A of Medicare) take effect on January 1, 1989. Acute-care hospital coverage will be unlimited. In contrast to current rules, Medicare participants will no longer face a limit on paid hospital days; furthermore, Medicare will pay all hospital costs after an initial deductible, while under the current arrangement patients must share costs after 60 days. The new law also expands benefits for skilled nursing facilities, home health care, and hospice care.

The *Supplementary Medical Insurance (SMI)* provisions (Medicare Part B) are the most costly part of the legislation over the 1989-1993 period, as shown in the table. The new law caps enrollees' copayment costs for covered services (primarily visits to physicians). The cap is $1,370 in 1990, and will be adjusted annually. In the absence of the cap, about 7 percent of participants would face higher copayment costs. The program will pay for mammography examinations, and will pay for occasional home help to relieve family caretakers who are responsible for a homebound patient if they meet certain eligibility rules.

Finally, the new law expands benefits to include outpatient *prescription drugs* (also under Part B of Medicare). Coverage is limited to intravenous and immunosuppressive drugs in 1990. Beginning in 1991, the program will pay increasing shares of other prescription drugs.

The new law also affects *Medicaid*, the joint federal/state health program for needy persons. Medicaid will be required to pay Medicare premiums and copayments for all enrollees below the poverty level; this cost to Medicaid is substantially offset because Medicare will increasingly assume some costs that Medicaid now pays. Other Medicaid provisions ease the financial burden on the spouses of beneficiaries in nursing homes, and expand coverage for infants and pregnant women in poor families.

Before passage of the new act, Medicare benefits were financed by a mixture of payroll taxes on active workers, enrollee premiums, and general revenues. The new benefits, in contrast, are paid for entirely by participants. About 37 percent of financing for the new benefits will come from additional monthly premiums paid by all Part B enrollees. The added premiums will grow from $4.00 a month in 1990 to $10.20 a month in 1993. Total premiums in 1993--including those under previously enacted laws--are estimated to be slightly over $40 a month. The remaining costs are financed by an income tax surcharge, also known as a supplemental premium. Roughly 40 percent of enrollees will pay the surtax, which climbs to an additional 28 percent of their income tax liability (subject to a cap) by 1993. To some extent, enrollees can offset their new Medicare costs by curtailing their supplemental private insurance, commonly called Medigap insurance.

Technical revisions, on balance, worsen the deficit slightly in all years except 1989. Technical changes in revenues, totaling $3 billion to $4 billion a year in 1989 through 1991 and smaller amounts thereafter, reflect mainly the observed shortfall in corporate income tax receipts that has persisted for the past two years. (The downward revision for 1988, about $9 billion, reflects the same shortfall.) Until detailed data on 1987 corporate receipts become available in the next two years, however, there is no way to ascribe the shortfall to specific industries or provisions of tax law.

As shown in Table II-6, technical changes in outlays are dominated by a few categories of spending. One revision results mainly from updated assumptions about prepayments of Foreign Military Sales loans; previously assumed to occur in 1988, these prepayments now appear likely to be spread over several years. In addition, under final regulations, more countries will find it advantageous to prepay. Another revision is most important early in the projections: the drought reduces agriculture outlays mainly in 1988 and 1989. Longer-run projections of Commodity Credit Corporation spending have also been reduced, however, to reflect underlying improvement in the farm economy. Estimates of defense spending are up in all years, reflecting higher spending from new budget authority and from unobligated balances, and deposit insurance costs are even higher than projected last winter. The Federal Deposit Insurance Corporation and the Federal Savings and Loan Insurance Corporation--both programs that, in the past, generally reduced the deficit--together are projected to incur outlays of more than $7 billion in 1989 and somewhat less in later years. Estimates of deposit insurance outlays are highly uncertain; no one knows the timing or amount of spending that will be needed to deal with insolvent financial institutions.

THE ECONOMY AND THE BUDGET

The federal budget is closely linked to the nation's economy. Revenues depend mainly on wages and salaries, corporate profits, and other taxable incomes. Most benefit programs are linked directly or indirectly to inflation, and some are sensitive to the unemployment rate. In its baseline projections, CBO also assumes that annual appropriations grow apace with inflation. Finally, the Treasury's huge

volumes of debt financing and refinancing make the budget projections highly sensitive to interest rates.

As discussed in Chapter I, the economic assumptions underlying the budget projections represent CBO's best estimates about economic performance through the end of 1989. Beyond 1989, forecasts of economic performance are impractical; instead, CBO develops projections based on historical trends, as discussed in Chapter I. Real interest rates, and the gap between actual and potential GNP, approach their historical averages, while inflation rates are held constant at their historical averages. These projections do not rule out a recession; but the next recession's timing is impossible to predict. Unless the next recession is unusually deep, it would be consistent with the average long-run growth path described here.

Alternative Economic Assumptions

CBO's short- and medium-term economic assumptions are close to the middle of the road. Some forecasters are more optimistic; some more pessimistic. But the projections are sensitive to the economic assumptions employed. Real economic growth is one of the most important economic variables affecting the budget projections, helping to determine revenues, spending for benefit programs such as unemployment insurance, and--indirectly--the cost of interest on the debt. If real growth exceeds CBO's assumption by a full percentage point each year beginning in October 1988, the deficit would be lower by an estimated $10 billion in 1989, $27 billion in 1990, and $138 billion in 1994. (The resulting real growth rate, averaging almost 3.5 percent a year, is well outside the consensus of economic forecasters.) Interest rates significantly affect the government's cost of financing its debt but are notoriously difficult to forecast. If interest rates are one percentage point higher than CBO assumes for the next six years--a relatively small error--interest outlays would be higher by an estimated $5 billion in 1989, $11 billion in 1990, and $27 billion in 1994.

OMB's long-run deficit projections are significantly lower than CBO's and illustrate the importance of economic assumptions. In 1993--the final year included in OMB's midsession review--the Administration projects a deficit under current policies of $53 billion, almost $70 billion lower than CBO's estimate. Much of the difference

stems from the Administration's assuming higher real economic growth and lower real interest rates than does CBO. The long-run economic projections used by CBO, however, are much closer to the consensus of private economists than are the Administration's.

How Economists Measure the Budget: The National Income and Product Accounts

Economists often measure the federal government's activities in ways that differ from the budget's treatment. Economists typically look at all receipts collected by the government from various sectors, including taxes, fees, insurance premiums, and so forth--a measure somewhat broader than federal budget revenues. They also divide spending into categories with different implications for the economy: defense and nondefense purchases (which enter directly into GNP), transfer programs (which do not directly use resources but instead support disposable income), grants to state and local governments, interest, and subsidies. The National Income and Product Accounts (NIPA) describe the federal government's activities in these terms. Using the NIPA definitions enhances analysis of the total (federal, state, and local) government sector, and makes international comparisons easier as well. The NIPA measures are also less influenced than the budget by certain one-time savings, such as asset sales or timing shifts.

In *The Economic and Budget Outlook: Fiscal Years 1989-1993* (February 1988), CBO described major differences between the budget and the NIPA and presented its budget projections in NIPA terms. Tables II-7 and II-8 update those projections. Table II-7 shows adjustments needed to put budget totals on a NIPA basis, and Table II-8 presents the baseline projections using the NIPA categories.

Two recent developments have special impacts on the NIPA projections. First, the drought dramatically reduces the government's stockpiles of grain. This translates into negative purchases by the Commodity Credit Corporation, depressing total nondefense purchases in 1988 and 1989. (The drought also affects CCC subsidies--that is, deficiency payments--as well as CCC's operating deficit, measured in the NIPA as the difference between CCC transaction

prices and market prices.) Second, the recent catastrophic health bill significantly increases the premiums paid by Medicare enrollees in return for additional benefits. The budget treats these as negative outlays; in the NIPA, however, they appear as government receipts, part of the netting and grossing adjustment that raises federal expenditures and receipts by equal amounts.

TABLE II-7. RELATIONSHIP OF THE BUDGET TO THE FEDERAL SECTOR OF THE NATIONAL INCOME AND PRODUCT ACCOUNTS (By fiscal year, in billions of dollars)

	1988	1989	1990	1991	1992	1993	1994
Receipts							
Total Revenues	908	980	1,064	1,134	1,202	1,276	1,354
Differences							
Government contributions for employee retirement	38	40	43	46	49	52	55
Medicare premiums	9	11	13	15	16	18	19
Other netting and grossing	10	10	10	10	10	11	11
Geographic exclusions	-3	-3	-3	-3	-3	-3	-3
Other	4	-2	2	a	2	2	2
Total Federal Sector NIPA Receipts	966	1,037	1,130	1,202	1,277	1,354	1,437
Expenditures							
Total Outlays	1,063	1,127	1,200	1,265	1,329	1,397	1,475
Differences							
Lending and financial transactions	-11	-15	-15	-13	-12	-10	-12
Government contributions for employee retirement	38	40	43	46	49	52	55
Medicare premiums	9	11	13	15	16	18	19
Other netting and grossing	10	10	10	10	10	11	11
Defense timing adjustment	4	3	3	3	3	3	3
Bonuses on Outer Continental Shelf land leases	1	1	1	1	1	1	1
Geographic exclusions	-6	-6	-7	-7	-7	-8	-8
Other	-5	-1	1	-2	-2	-2	-2
Total Federal Sector NIPA Expenditures	1,103	1,171	1,249	1,317	1,386	1,460	1,541

SOURCE: Congressional Budget Office.

a. Less than $500 million.

TABLE II-8. PROJECTIONS OF BASELINE REVENUES AND EXPENDITURES ON A NATIONAL INCOME AND PRODUCT ACCOUNTS BASIS
(By fiscal year, in billions of dollars)

	1988	1989	1990	1991	1992	1993	1994
Receipts							
Personal Tax and Nontax Receipts	418	441	486	523	560	599	638
Corporate Profits Tax Accruals	111	127	142	149	155	161	168
Indirect Business Tax and Nontax Accruals	56	59	60	58	59	61	63
Contributions for Social Insurance	381	410	442	472	503	534	568
Total Receipts	966	1,037	1,130	1,202	1,277	1,354	1,437
Expenditures							
Purchases of Goods and Services	381	396	416	434	452	472	492
Defense	298	306	315	328	343	357	373
Nondefense	83	91	101	106	109	114	120
Transfer Payments	431	464	505	542	581	623	667
Grants-in-Aid to State and Local Governments	107	116	122	129	135	145	154
Net Interest Paid	151	164	179	188	192	197	202
Subsidies Less Current Surplus of Government Enterprises	33	32	26	23	25	23	25
Total Expenditures	1,103	1,171	1,249	1,317	1,386	1,460	1,541
Deficit							
Deficit	137	134	119	115	109	105	104

SOURCE: Congressional Budget Office.

APPENDIXES

APPENDIX A

THE EFFECT OF COMPUTER AND PETROLEUM PRICES ON NIPA MEASURES OF REAL GROWTH

Although the prices of most goods and services have risen about 20 percent since 1982, computer and petroleum prices have fallen. The wide divergence in price changes between these commodities and other goods since the 1982 base year for the National Income and Product Accounts (NIPA) introduces possible distortions in the calculation of real growth rates for GNP, and for final sales, investment, and other subcategories of GNP. If the NIPA base year was set to be 1987, the reported growth of real (inflation-adjusted) final sales in the first half of this year would probably have been lower by almost one percentage point than the figure actually reported.

The problem is best illustrated by examining the effect computers have had on the growth of real equipment purchases by firms. The share of office equipment (which is primarily computers) in total purchases of equipment was 9.3 percent in 1982 in nominal (current) dollars, and, because all price indexes are set equal to 1.00 in that year for the NIPA data, the share in real dollars was the same.[1] In the first half of 1988, however, office equipment was equal to about 12 percent of total purchases of producers' durable equipment in nominal terms and over 28 percent in real terms.

The large increase in office equipment as a share of real purchases of total equipment since 1982 is a result of the fall in prices for office equipment (mainly computers) relative to total equipment prices. In constructing the price index for computer equipment purchases, the Bureau of Economic Analysis (BEA) incorporates a quality adjustment to computer prices.[2] This adjustment, which has considerable economic justification, has caused the price index to follow a downward trend since 1969, reflecting rapid technological advances. As a

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1. Although the price indexes are set equal to 1.00 in 1982 for calculating real values, by convention the series are multiplied by 100 for reporting purposes.

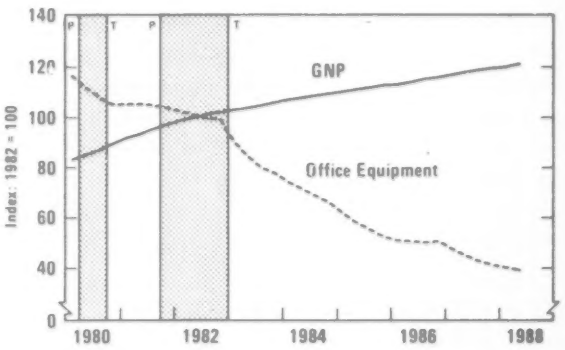
2. For an explanation of this quality adjustment, see David W. Cartwright, "Improved Deflation of Purchases of Computers," *Survey of Current Business* vol. 66 (March 1986), pp. 7-10.

result, the implicit price deflator for office equipment (mainly computers) currently stands at just 0.39, that is, 39 percent of its 1982 level, as shown in Figure A-1. (Real values for detailed GNP components are calculated as nominal values divided by their corresponding price indexes. Implicit price deflators for aggregates are the sums of nominal values of components divided by the corresponding sums of real values.) The implicit price deflators for other categories of producers' durable equipment average about 1.14. The difference between the level of the implicit price deflator for office equipment and that for other equipment amplifies current dollar fluctuations of computer purchases into substantially larger real movements; for example, a $1 increase in office equipment purchases, when divided by a deflator of 0.39, results in a real value of $2.56, whereas $1 spent on other kinds of equipment would result in only $0.88 in real terms. In this way, the recent growth rates of real equipment purchases and, in fact, of any NIPA category that includes computers tend to be overstated.

If the base year for the NIPA data were closer to 1988, computers would not have such a large weight in real producers' durable equipment this year and, consequently, they would not have such a large effect on real growth measures. When NIPA data are rebased to 1987, for that year, all implicit price deflators will be set equal to 1.00, the share of any category of investment in producers' durable equipment will be based on the current dollar share, and a $1 increase in any cat-

Figure A-1.
Comparison of the Implicit Price Deflators for GNP and Office Equipment

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.



egory of producers' durable equipment will result in only a $1 increase in real terms.[3] Therefore, given the large relative movements in prices since 1982, the choice of base year affects the implicit price deflators and real growth measures. In general, the use of a base year close to the period being examined will yield more useful measures of real growth rates.

The Congressional Budget Office has estimated the effect of the relative price changes since 1982 on recent measures of real growth by rebasing NIPA data to 1987. When BEA rebases the NIPA data in 1990, it will use information on approximately 600 different categories of final demand. Because CBO has estimated the effect of rebasing using a much smaller number of categories, these results should be considered tentative, although they provide an idea of the effect of changes in relative prices on measures of real growth.[4]

The rebasing carried out by CBO indicates that there is a significant difference between the 1982-based and the 1987-based measures of real final sales growth in the first half of 1988. CBO estimates that real final sales growth in the first half of this year is about 0.8 percentage point lower in 1987 dollars than in 1982 dollars (see Figure A-2). The growth rate of the implicit price deflator for final sales is correspondingly higher.

Because computers and petroleum are important in foreign trade, the choice of base year affects measures of real imports and exports as well. When rebased to 1987, the growth rates of both real imports and real exports were reduced for recent years (see Figure A-2). The growth rates were lowered because computers, for which the value of imports and exports grew rapidly throughout this period, were given less weight in aggregate real imports and exports than in the 1982-based measure. The growth rate of real imports was also affected by the smaller weighting given to petroleum imports in the 1987-based

---

3. BEA currently plans to rebase NIPA data to 1987 in 1990. Data revisions and definitional changes will also be incorporated in the rebenchmarked data.

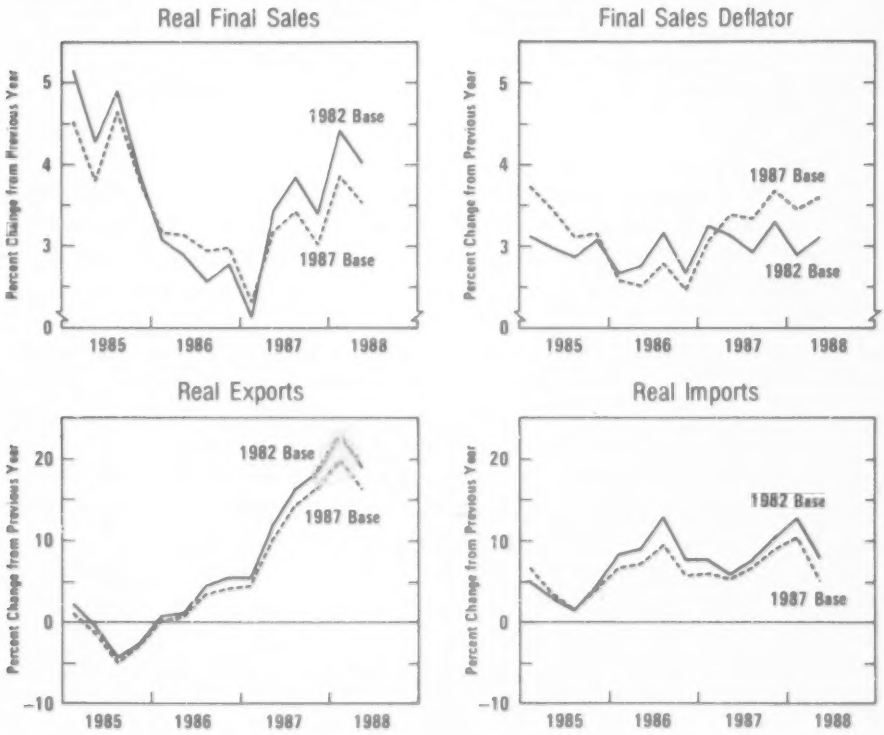
4. This calculation was performed by disaggregating final sales--excluding Commodity Credit Corporation (CCC) purchases--into 30 expenditure categories, rebasing the individual deflators for each category to 1987, and reaggregating using these deflators. Inventory change and CCC purchases were not included because data for disaggregation and rebasing were not available.

measure. The growth rates of the implicit price deflators for exports and imports were correspondingly reduced.

In general, when compared with the 1982-based measures, the 1987-based data present a picture of slower real economic growth in the first half of this year. Recent real growth in investment, productivity, and a number of other areas may also be overstated in the published data as a result of the changes in relative prices since 1982, complicating the assessment of the current strength of the economy.

Figure A-2.

The Effect of Rebasing on Measures of Real Growth



SOURCES: Congressional Budget Office, Department of Commerce, Bureau of Economic Analysis.

APPENDIX B

FARM COMMODITY PROGRAM SPENDING

The drought that is affecting this summer's crop production has led to large downward adjustments in the Congressional Budget Office's projections of farm price and income support spending by the U.S. Department of Agriculture through its Commodity Credit Corporation (CCC). CBO now projects that CCC outlays will total $12.3 billion during 1988, rise to $13.4 billion in 1989, fall to just below $12.5 billion in 1990 and 1991, and then gradually decline to $9.6 billion by 1994 (see Table B-1).[1] Last March, before the beginning of the drought, CBO projected CCC outlays of $17.0 billion in 1988 and $17.4 billion in 1989.

CCC outlays would have been far lower in 1989 without the $4.5 billion in added spending caused by the Disaster Assistance Act of 1988. Almost all of the costs of this legislation occur in 1989 and are direct payments made to farmers and ranchers who have suffered crop losses because of the drought. In addition to CCC costs, the Disaster Assistance Act of 1988 will increase fiscal year 1989 spending by an estimated $0.6 billion mainly by providing additional Farmers Home Administration loans to farmers in disaster areas.

Several factors other than the drought have caused changes in the CBO baseline projections. Weaker markets for cotton and rice than previously expected have caused projections for cotton program outlays to be raised by $1.1 billion and rice program outlays by $0.3 billion for 1989. Reestimates in these crop program outlays are smaller in subsequent years.

Also unrelated to the drought, CBO has raised by relatively small amounts the projected prices of wheat and feed grains for future years.

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1. Current law governing most farm programs expires in 1990. The CBO baseline projection for CCC outlays assumes that the current farm law is extended beyond its expiration and that target prices, which are used to calculate deficiency payments made to farmers, continue to decline. For a general explanation of the assumptions underlying the baseline, see Congressional Budget Office, *The Outlook for Farm Commodity Program Spending, Fiscal Years 1988-1993* (June 1988).

The increases, which average $0.15 per bushel for corn and $0.20 per bushel for wheat over the 1989-1993 crop years, cause projected CCC outlays to drop by over $2 billion annually. CBO increased price projections after reviewing market prices for 1987 crops. Projected market prices are still low by historical standards and reflect the assumption that the Secretary of Agriculture would operate the farm programs to maintain these low prices and keep U.S. wheat and feed grain crops competitive in world markets.

The CCC relies on a combination of program elements to affect farm production, commodity prices, and federal program costs. Acreage reduction and paid land diversion programs, under which producers agree to idle certain portions of cropland, can be used to reduce production of wheat, feed grains, cotton, and rice. Nonrecourse loans, which allow producers to pledge crops as collateral, are used to support prices of wheat, feed grains, and soybeans, and export subsidies are used to increase exports (mostly of wheat) by reducing the price to

TABLE B-1. CBO PROJECTIONS FOR COMMODITY CREDIT CORPORATION OUTLAYS
(By fiscal year, in millions of dollars)

Commodity	1988	1989	1990	1991	1992	1993	1994
Corn and Other Feed Grains	8,185	1,735	5,521	6,636	5,751	5,546	5,349
Wheat	767	753	1,731	1,664	1,635	1,274	1,093
Rice	335	961	1,010	1,041	1,013	940	922
Upland Cotton	748	2,472	1,699	1,084	734	540	472
Soybeans	-1,667	-282	78	27	26	26	27
Dairy	1,343	884	698	604	535	527	519
Other Commodities	-238	-177	-149	65	130	114	114
Subtotal	9,474	6,346	10,588	11,121	9,824	8,967	8,496
Other Outlays	2,857	2,512	1,404	1,195	1,132	1,128	1,125
Disaster Assistance Act of 1988	0	4,525	190	90	30	0	0
Total	12,331	13,383	12,182	12,406	10,986	10,095	9,621

SOURCE: Congressional Budget Office.

foreign buyers. In addition, stocks owned by the CCC can be released to the market to increase available supplies and reduce market prices.

The Secretary of Agriculture has broad discretion in choosing how program tools are used. Before this summer's drought, CBO assumed that the Secretary would attempt to keep prices for wheat and feed grains relatively low to encourage exports while restricting current production to reduce the excessive government stocks that had accumulated in previous years. This would be done initially by making government-owned grain available to the market while restricting current production through the acreage reduction program. After excess stocks had been reduced, the acreage reduction requirements for producers would be relaxed to allow greater current production.

The drought has accelerated the reduction of excess stocks--particularly of corn, but also of wheat. This rapid stock reduction allows future acreage reduction programs to be smaller. Each year's needs are now projected to be met completely by current production rather than by supplementing production with stocks in storage from earlier years. Smaller acreage reduction programs in the future will benefit producers of wheat and feed grains because less land will have to be idled to qualify for government programs. As a result, the amount of each producer's crop eligible for deficiency payments and other program benefits will increase, leading to greater net returns for producers--and higher government costs with other factors held constant. Eliminating excess government stocks quickly now may later be seen by some producers as a benefit of this drought: a natural event is doing what several years of relatively restrictive acreage control programs would have accomplished.

CBO projects that general market conditions for the major supported farm commodities will gradually improve following the 1988 crop year. Table B-2 shows projected supply, use, and prices for these commodities.[2] In these projections, normal weather conditions are assumed to prevail for crops harvested in 1989 and later years.

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2. For corresponding commodity supply, use, and price assumptions underlying the March 1988 baseline projections, see Congressional Budget Office, *The Outlook for Farm Commodity Program Spending, Fiscal Years 1988-1993*, Summary Table 2, p. xv.

TABLE B-2. CBO PROJECTIONS FOR THE SUPPLY, USE, AND PRICE OF MAJOR FARM COMMODITIES SUPPORTED BY THE COMMODITY CREDIT CORPORATION (By crop year)

	1988	1989	1990	1991	1992	1993
Corn						
(In billions of bushels)						
Production	4.70	7.39	7.74	8.13	8.21	8.45
Exports	1.58	1.76	1.87	1.98	2.05	2.11
Total Use	7.00	7.51	7.75	8.06	8.25	8.40
Ending Stocks	2.13	2.01	1.99	2.07	2.03	2.08
Price (Dollars per bushel)	2.80	1.94	1.89	1.80	1.82	1.86
Wheat						
(In billions of bushels)						
Production	1.84	2.63	2.62	2.65	2.69	2.73
Exports	1.31	1.50	1.54	1.55	1.56	1.58
Total Use	2.38	2.58	2.67	2.63	2.69	2.73
Ending Stocks	0.74	0.80	0.77	0.80	0.81	0.82
Price (Dollars per bushel)	3.71	3.04	3.07	3.09	3.11	3.12
Rice						
(In millions of cwt)						
Production	159.1	161.4	174.0	182.9	183.4	199.1
Exports	74.9	77.0	80.4	84.6	86.8	87.5
Total Use	160.3	166.9	175.6	185.3	192.9	198.5
Ending Stocks	33.5	31.2	32.8	33.5	27.2	31.0
Price (Dollars per cwt)	5.90	6.20	6.00	5.85	6.05	6.25
Cotton						
(In millions of bales)						
Production	13.5	12.2	12.4	12.9	13.2	13.7
Exports	4.6	5.7	5.8	6.1	6.0	6.1
Total Use	11.6	13.6	13.3	13.8	13.7	13.8
Ending Stocks	7.3	6.1	5.3	4.5	4.1	4.1
Price (Dollars per pound)	0.423	0.450	0.558	0.571	0.652	0.648
Soybeans						
(In billions of bushels)						
Production	1.63	2.08	2.04	2.04	2.09	2.11
Exports	0.60	0.73	0.73	0.72	0.74	0.75
Total Use	1.78	2.04	2.04	2.04	2.07	2.10
Ending Stocks	0.14	0.18	0.18	0.18	0.19	0.20
Price (Dollars per bushel)	7.96	5.69	5.85	6.03	5.88	5.85
Dairy Products[a]						
(In billions of pounds)						
Production	144.1	145.5	146.3	148.8	150.0	151.5
Commercial Use	135.0	137.8	140.2	142.9	145.5	147.7
CCC Removals[b]	9.4	8.0	6.4	6.3	4.9	4.2
Price Support[c] (Dollars per cwt)	10.60	10.60	10.10	9.60	9.10	9.10

SOURCE: Congressional Budget Office.

NOTE: cwt = hundredweight.

a. Dairy products are reported by fiscal year.

b. Removals refer to net government purchases of dairy products for the purpose of supporting the farm price of milk.

c. The price support is in effect for the 12 months following January 1 of each year, except for 1989, when the price support for April through June rises to $11.10.

Corn. CBO projects that the drought will reduce the 1988 corn crop to 4.7 billion bushels from the 7.3 billion bushels projected last March. Prices are expected to average $2.80 per bushel during the 1988 crop year, 57 percent above earlier expectations. Corn stocks are expected to fall to 2.13 billion bushels by the end of the 1988 crop year (August 1989), less than three-fifths of the level projected last March. Even with no paid land diversion and lower requirements for acreage reduction, stocks are projected to remain around 2 billion bushels through 1993. With government-held stocks projected to fall sharply, free stocks held by farmers and users are expected to rise. CCC outlays for all feed grains are projected to fall to $8.2 billion in 1988, down from the $13.1 billion projected last March. By 1993, outlays are projected to be $5.5 billion, 70 percent of earlier expectations.

Wheat. Because of the extreme damage to the spring wheat crop, wheat prices are expected to rise from $2.57 per bushel for 1987 to $3.71 during the 1988 crop year (ending May 1989). Stocks at the end of 1988 are now expected to fall by over 40 percent from 1987, and a major drop in required acreage reduction was announced for 1989. Prices in later years are projected to fall back to the $3.00-per-bushel range, moving up marginally each year. Even with prices in the 1990-1993 period higher than projected last March, use is expected to be slightly higher than previously thought. Stocks are projected to remain around 800 million bushels, held almost entirely as free stocks by farmers and users. Cash outlays for 1990 and later years are higher than projected last March because CBO now anticipates that deficiency payments will be made in cash rather than in generic commodity certificates, most of which were expected to be redeemed in corn.[3] Also, with only a 5 percent acreage reduction requirement, a large part of the crop is eligible for deficiency payments.

Cotton and Rice. The projected prices for 1988 crops of cotton and rice have been reduced since last March, leading to sharp increases in projected CCC outlays for these crop programs in 1989. The current projection for ending stocks of cotton through 1990 is higher than last March's, with lower demand expected. For rice, the supply and de-

3. Generic commodity certificates are sometimes issued to CCC program participants instead of cash. When they are issued to producers of one crop, subsequently sold, and redeemed by producers of another crop, generic certificates cause an understatement or overstatement of actual spending levels for individual crop programs. For a complete explanation, see Congressional Budget Office, *The Outlook for Farm Commodity Program Spending, Fiscal Years 1988-1993*, p. 10.

mand situation is similar to that projected in March. However, expected world prices are lower now than last March. Prices are substantially reduced from previous expectations for most years. In contrast with wheat and feed grains, the acreage reduction requirements for cotton and rice are projected to be higher than anticipated last March.

Soybeans. CBO projects that the drought will reduce soybean production for 1988 to 1.63 billion bushels (18 percent below the projection last March). Farm prices are expected to average nearly $8.00 per bushel during the 1988 crop year, 40 percent above earlier expectations. Soybean prices in subsequent years are projected to average $5.85 per bushel, assuming a return to normal weather. The soybean program is still projected to have a minimal effect on CCC outlays for most years. The drought has caused offsetting receipts in the soybean program to be substantially greater than projected last March because high prices and strong demand have increased both the volume of government loans repaid and the value of CCC sales of soybean stocks.

Dairy. The dairy program has been modified by the Disaster Assistance Act, contributing to higher expected outlays. The milk support price for 1989 will remain at $10.60 per hundredweight, instead of dropping to $10.10 as previously projected. For three months--April through June 1989--the support price will rise to $11.10 per hundredweight. Without the support price changes mandated in the act, outlays are projected to total $0.9 billion in 1989. The Disaster Assistance Act of 1988 will add an additional $240 million in outlays. In later years, outlays are expected to fall as additional price support reductions help to balance dairy production with consumption.

APPENDIX C

MAJOR CONTRIBUTORS TO THE REVENUE AND SPENDING PROJECTIONS

The following analysts prepared the revenue and spending projections in this report:

Revenue Projections

Mark Booth	Corporate income taxes, Federal Reserve System earnings
Jon Hakken	Windfall profit tax
Richard Kasten	Individual income taxes
Eric Nicholson	Excise taxes
Kathleen O'Connell	Individual income taxes, estate and gift taxes
Marianne Page	Customs duties, miscellaneous receipts
Linda Radey	Social insurance contributions, excise taxes
Frank Sammartino	Individual income taxes

Spending Projections

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Kent Christensen	International Affairs
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Amy Plapp	Defense
Joseph Whitehill	International affairs
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Cathy Ellman	Foreign Service Retirement
Alan Fairbank	Hospital Insurance
Holly Harvey	Suppmenentary Medical Insurance
Lori Housman	Public Health Service
Deborah Kalcevic	Education
Jean Kayser	Health programs
Julia Isaacs	Food Stamps, child nutrition
Donald Muse	Medicaid, Medicare
Michael Namian	Social services
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Michael Pogue	Unemployment Insurance, training programs, Civil Service Retirement
Kathleen Shepherd	Veterans' benefits

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Douglas Criscitello	Commerce, disaster relief and insurance
Peter Fontaine	Energy
Theresa Gullo	Water resources, conservation, and land management
James Hearn	General government, Agriculture Credit Insurance Fund, Outer Continental Shelf receipts
Hsin-Hui Hsu	Agriculture
Mary Maginniss	Postal Service, deposit insurance, Small Business Administration
Eileen Manfredi	Agriculture

Spending Projections (continued)

Natural and Physical Resources (continued)

Marjorie Miller	Transportation
Andrew Morton	Agriculture
Deborah Reis	Recreation, pollution control water transportation
Mitchell Rosenfeld	Air transportation, justice
Brent Shipp	Housing and Mortgage credit
Michael Sieverts	Science and space, justice, other natural resources

Other

Janet Airis	Appropriation bills
Edward Blau	Appropriation bills
Kim Burke	Budget process
Paul Christy	Other interest
David Elkes	National Income and Product Accounts
Betty Embrey	Appropriation bills
Kenneth Farris	Computer support
Danila Girerd	Credit analysis
Glen Goodnow	Authorization bills
Vernon Hammett	Computer support
Sandra Hoffman	Computer support
Richard Krop	Civilian agency pay
Fritz Maier	Computer support
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Rodney Rasmussen	Budget projections
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Karla Trujillo	Appropriation bills
Paula Wiliams	Computer support

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